

CITY OF NEWTON
PURCHASING DEPARTMENT

PROJECT FOR PUBLIC BUILDINGS DEPARTMENT

PROJECT MANUAL:
ENVELOPE IMPROVEMENTS
AT LOWER FALLS COMMUNITY CENTER
INVITATION FOR BID #12-32

Pre-Bid Meeting: December 8, 2011 at 10:00 a.m.

Bid Opening Date: December 15, 2011 at 10:00 a.m.

Prepared by:
Knight, Bagge & Anderson, Inc.
6 Thirteenth Street
Charlestown, MA 02129
617-241-2807
Fax 617-241-2857

December 2011

Setti D. Warren, Mayor

CITY OF NEWTON, MASSACHUSETTS

PURCHASING DEPARTMENT

purchasing@newtonma.gov

Fax (617) 796-1227

December 15, 2011

ADDENDUM #2

INVITATION FOR BID #12-32

LOWER FALLS COMMUNITY CENTER IMPROVEMENTS

THIS ADDENDUM IS TO: **Answer the following Questions: and consists of 10 pages including 3 attachments (SKA-01, SKA-02 and the window materials sampling and test results)**

Q1. Storage for salvage Materials? Does LFCC provides any space? (mats, doors, etc).

A1. The phasing plan limits the scope of work to a single classroom at any period so the storage for salvage materials can be down within each classroom under repair and the door will be reinstalled at the completion of the classroom. Likewise, when work takes place within the gymnasium and the office areas, materials to be reinstalled can be stored in the limited work area within those areas.

Q2. Is there any exterior space allocated for Dumpsters, Trailers, etc?

A2. Space will be allowed for dumpsters and trailers. Locations on site to be determined.

Q3. Remove and dispose of existing shades. Provide new ones. Please confirm.

A3. Yes, remove and dispose and provide new. See Demolition Note #3 on Drawing D2 and window general Note #1 on Drawing A3 and specification Section 12 24 00 – Window Shades.

Q4. Detail 14/A5 mentioned does not exist. You mean 14/A3. Please confirm.

A4. Reference should be 14/A3

Q5. Gymnasium: Items are fixed on interior of perimeter walls where we insulate. How do we proceed? Remove and reinstall or other? Please Clarify.

A5. Remove and store the two existing basketball back boards and supports and store in a safe place on site. Backboards are to be re-installed in same mounting locations and shall be the same distance from the foul lines when set on face of new wall. Refer to SK-01 for additional information. Remove the existing motion sensor at South-East corner and re-install in the same location when the new wall is completed. Remove existing emergency lights/cage at the East and West walls. Provide solid blocking for re-installation of light and cage at West wall only. Remove and discard clock and cage on the East wall. Remove emergency exit signs on the East and West ends of the north wall and the existing fire alarm pull and strobe are to be removed and rewired if required in order to install at new location. Only one illuminated exit sign is to be reinstalled above the new exit door. Refer to SK-02 for additional information. Terminate abandoned feeds from exit sign and clock at North-East corner of gymnasium and emergency light at East wall per City of Newton Wiring Department requirements. At two existing outlets on East & West walls, install workbox extenders in order for the existing outlets to be flush with the new finished wall surfaces.

Q6. Section 024100 – Demolition, 1.02B3. Notes the Caulking and glazing have asbestos. Is there a report available? Also to confirm, is the owner contracting with a Hygienist.

A6. Universal Environmental did perform sampling and testing. The results of the sampling is attached to this addendum. The Owner will be responsible for contracting a Hygienist to perform monitoring services during construction.

Q7. Section 037300 – Concrete Repair as the spec is written the GC owns all repairs found below the grade after this foundation is exposed. As of today the plan only identifies three locations to have repairs. After walking the site there are many more areas visible. Most tops of wall where the window systems rests is in bad shape with many visible cracking. As it stands right now a GC would cover the entire surface to cover the unknown scope of work. It is our recommendation that the owner should set an allowance of repairs to be done beyond what is noted on the drawings. This way you will have control of the cost and set every Bidder on the same playing field. With the intent that any work above would be negotiated. The owner then would have less headache and better control over the issue.

A7. Clarification: Any visible damaged concrete foundation is to be repaired under the base bid, including the locations noted as well as the sills at the top of the foundation walls where the existing windows are set. Each bidder is directed to carry an allowance of \$ 5,000 in their bids to cover the costs for repairs to any additional concrete work that is required if it is revealed during excavation. The contract amount will be adjusted up or down depending on whether more or less work is required under the allowance.

Q8. The New Door and Frame being asked for shows no dimensions. The Demo drawing notes the RO to be 3'-3" is this correct and height to match the existing?

A8. Rough opening of demolition should be sized to allow for a new 3'-0" x 6'-10" door and frame. Refer to detail 18 & 19 on A3.

Q9. Please provide clarification as to who will be responsible for securing the fire alarm system during construction and what procedures need to be followed to do so.

A9. The Fire Department has indicated that it is required that fire protection of some form remain throughout construction. GC shall provide heat detectors in place of the existing smoke detectors where applicable within the space where work is being done. This process will require that GC hire a licensed electrician to coordinate with the fire department wire division, as they serve as the authorized service company for this property. The electrician shall submit a plan to maintain protection and secure a permit from the fire department. Once the construction is completed the original smoke detectors shall be reinstalled.

Q10. Will a staging area be set aside for the contractor to store things such as a dumpster, storage container and mobile tool vehicle.

A10. See Q2, A2

Q11. Was ACM Report done to identify ACM materials? This report should be provided in order to accurately price ACM removal work. A specific area would be caulking at aluminum window walls may or may not be ACM.

A11. See Q6, A6

Q12. Please provide a bid quantity for concrete foundation spall repair area. Drawings only identify area at NE corner of Gym and two areas at Elev 1/D2 on D1

A12. See Q7, A7. Refer to Detail 8/A5.

Q13. D1 West side of Classroom 1 and crosshatch area referenced to General Note on A1 indicate work noted in General Note; however Section 2A/A4 for this area does not show this work. Which is correct?

A13. See wall section 1/A4 and detail 1/A5 for more information.

Q14. At Gym nothing is shown for remove/reinstall of basketball backboards, emergency lighting, clock/intercoms?, or electric receptacles at wall pads. Is this work by others?

A14. See attached SK.01 also Q.5, A5 in this addendum.


CHANGES TO THE DRAWINGS:

- Item 1.01. Drawing D1. Classroom 1 - At the west wall, add the following note: "Carefully remove and store the existing tackboards. The tackboards are to be reinstalled".
- Item 1.02. Drawing D1. Classroom 2- At the east wall, add the following note: "Carefully remove and store the existing tackboards. The tackboards are to be reinstalled".
- Item 1.03. Drawing D2. Demolition notes: Delete Note #4 in its entirety and replace with the following note: "4. Remove and deliver existing air conditioning units to Owner". The Owner shall be responsible for storage.
- Item 1.04. Drawing D2. Elevation 3/D2- Delete the door opening dimensions and add the following note: "Provide a new rough opening to accommodate a new 3'-0" x 6'-8" door and frame."
- Item 1.05. Drawings D2 and A2. Change all Elevation scale references from: "1/4" = 1'-0" ", to: "1/8" = 1'-0".
- Item 1.06. Drawing A1. Classroom 1 – At the west wall, indicate the existing tackboards to be reinstalled. Provide blocking, if required, in the new stud partition.
- Item 1.07. Drawing A1. Classroom 1 – At the east wall, indicate the existing tackboards to be reinstalled. Provide blocking, if required, in the new stud partition.
- Item 1.08. Drawing A1. Classroom-3- Delete the new duplex outlet closest to exterior door. Change the quantity in the note referring to new duplex outlets from: "4", to: "3".
- Item 1.09. Drawing A1. Gymnasium- Exterior elevation symbol clarification. Elevation symbols located on the North wall at new sidewalk. Symbol facing West should read as "5/A2". Symbol facing East should read as "4/A2".
- Item 1.10. Drawing A2. West Elevation 1/A2- Continue cross hatching, depicting excavation and insulation below grade, to the South end of the building.
- Item 1.11. Drawing A3. Detail #18- Remove "FIXED WINDOW TO ENTRANCE" below detail title.
- Item 1.12. Drawing A3. Add Detail #19 title symbol between Detail #18 and Detail #20. Detail Title shall be "DOOR JAMB"
- Item 1.13. Drawing A3. Detail #20- Remove "FIXED WINDOW TO ENTRANCE" below detail title.
- Item 1.14. Drawing A4. Wall Section 5/A4. Change enlarged detail reference from: "14/A5", to: "14/A3".

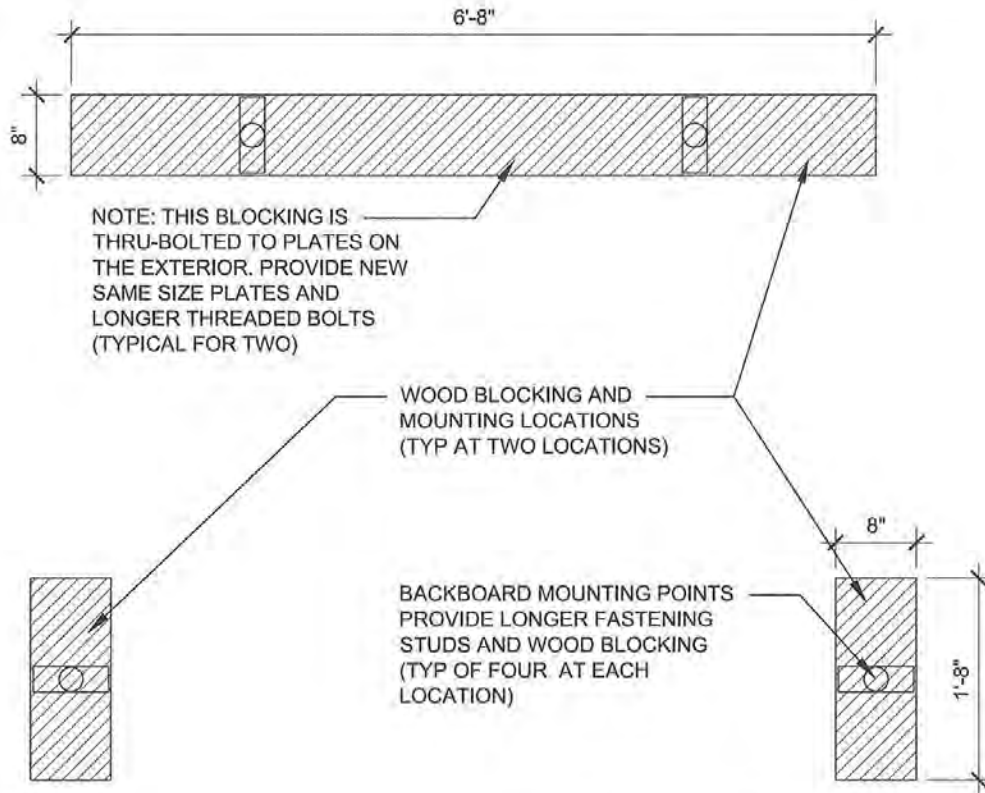
All other terms and conditions of this bid remain unchanged.

PLEASE ENSURE THAT YOU ACKNOWLEDGE THIS ADDENDUM ON YOUR BID FORM.

Thank you.



Rositha Durham
Chief Procurement Officer



NOTE:
G.C. TO VERIFY ALL
DIMENSIONS IN FIELD

GENERAL NOTE: REMOVE EXISTING BASKETBALL BACKBOARDS AND EXISTING WOOD BLOCKING. REPLACE EXISTING THREADED RODS WITH NEW LONGER THREADED RODS SO THAT THE RODS WILL EXTEND PASS THE NEW BLOCKING (ROUGHLY 3") AND CAN BE FASTENED WITH REQUIRED NUT. INSTALL NEW RODS, RE-INSTALL EXISTING SOLID WOOD BLOCKING IN THEIR RESPECTIVE PREVIOUS LOCATIONS. PROVIDE TWO LAYERS OF 2X8 SOLID WOOD BLOCKING (SHOWN IN HATCH) ON TOP OF RE-INSTALLED BLOCKING. PAINT EXPOSED WOOD BLOCKING. PAINT TO MATCH WALL RE- INSTALL BACKBOARDS. ENSURE DISTANCE FROM BACKBOARD TO FOUL LINE IS SAME AS EXISTING

1 ELEVATION- BACKBOARD MOUNT

SCALE: 3/4"=1'-0"

KBA ARCHITECTS
KNIGHT, BAGGE AND ANDERSON, INC.

6 THIRTEENTH STREET
CHARLESTOWN, MA 02129
617-241-2807 (T)
617-241-2857 (F)

LOWER FALLS COMMUNITY
CENTER ENVELOPE
IMPROVEMENTS
545 GROVE STREET
NEWTON, MA 02462

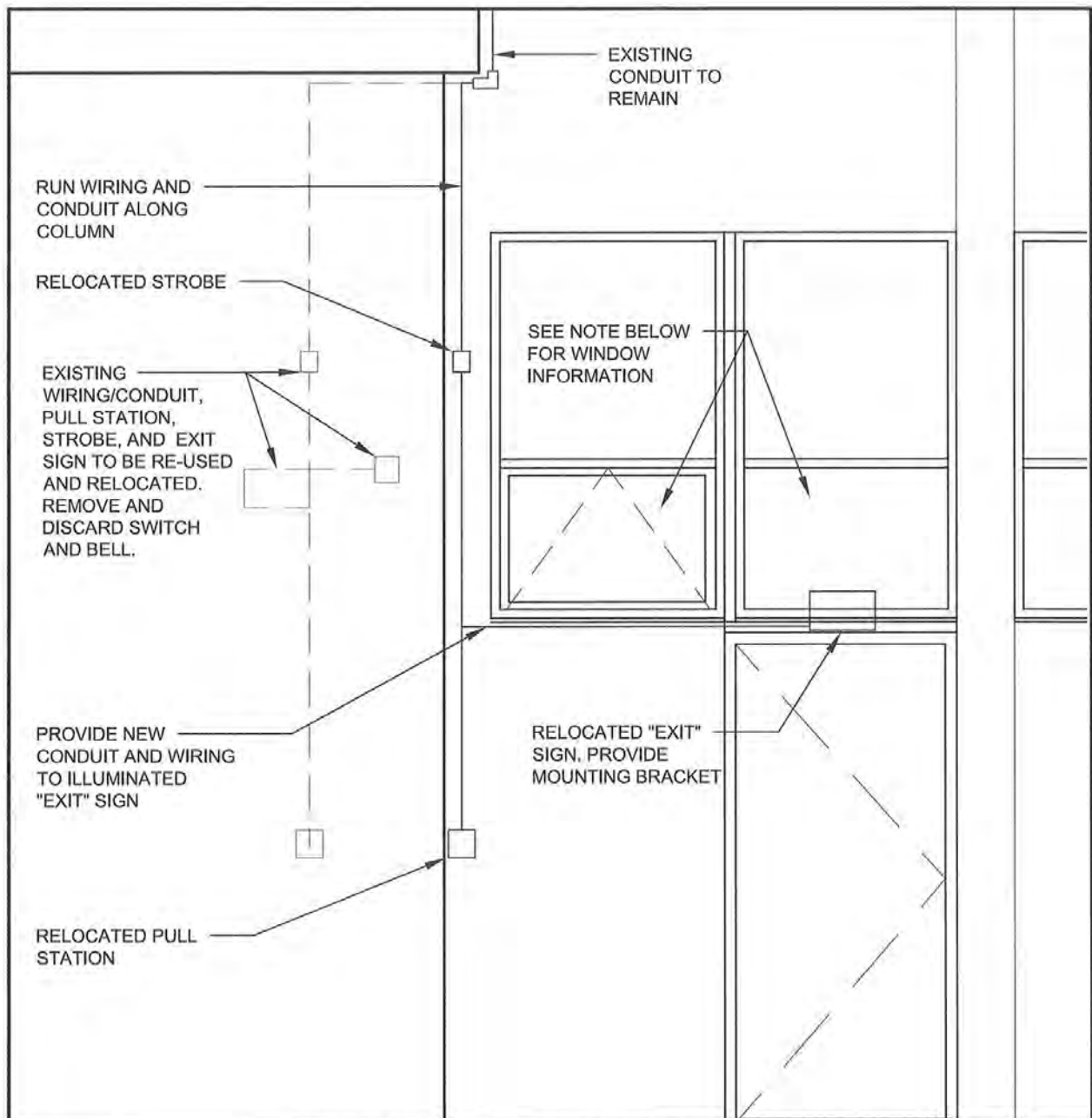
DRAWING TITLE

BASKETBALL
BACKBOARD
MOUNTING

JOB No.
S112110-N
DATE
12-13-11
REF. DRAWING
A1

SKETCH No.

SKA-01



WINDOW NOTE: ELEVATION 3/A2 SHOWS A TYPE "E" WINDOW WITH AN OPERABLE WINDOW ABOVE THE DOOR. PLEASE NOTE THAT THE OPERABLE WINDOW HAS BEEN REVERSED IN ELEVATION SO THAT THERE IS NOW A FIXED WINDOW ABOVE THE NEW DOOR.

1

INTERIOR PARTIAL ELEVATION

SCALE: 1/2"=1'-0"

KBA ARCHITECTS <small>KNIGHT, BAGGE AND ANDERSON, INC.</small> 6 THIRTEENTH STREET CHARLESTOWN, MA. 02129 617-241-2807 (T) 617-241-2857 (F)	LOWER FALLS COMMUNITY CENTER ENVELOPE IMPROVEMENTS 545 GROVE STREET NEWTON, MA 02462	DRAWING TITLE FIRE-ALARM MOUNTING LOCATIONS	JOB No. S112110-N	SKETCH No. SKA-02
			DATE 12-13-11	
			REF. DRAWING A1	

**AmeriSci Boston**8 SCHOOL ST.
WEYMOUTH, MA 02189

TEL: (781) 337-9334 • FAX: (781) 337-7642

PLM Bulk Asbestos ReportUniversal Environmental Consultant
Attn: Ammar Dieb
12 Brewster Road

Framingham, MA 01702

Date Received 05/06/10**Date Examined** 05/07/10**AmeriSci Job #** 510051075**P.O. #****Page** 1 **of** 3**RE:** 545 Grove St / Burr Elem; Newton

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
1 A Location: 545 Grove St., Main Entrance Analyst Description: Grey, Homogeneous, Fibrous, Win Fr Asbestos Types: Chrysotile 3.0 % Other Material: Fibrous Talc 1 %, Non-fibrous 96 %	510051075-01	Yes	3 % (by CVES) by Ivan H Reyes on 05/07/10
2 A Location: 545 Grove St., Rear Analyst Description: Win Fr Asbestos Types: Other Material:	510051075-02		NA/PS
3 A Location: 545 Grove St., Gym Win System Analyst Description: Win Fr Asbestos Types: Other Material:	510051075-03		NA/PS
4 B Location: 545 Grove St., Small Win, Rear Analyst Description: White, Homogeneous, Non-Fibrous, Thick GI Asbestos Types: Other Material: Fibrous Talc Trace, Non-fibrous 100 %	510051075-04	No	NAD (by CVES) by Ivan H Reyes on 05/07/10
5 B Location: 545 Grove St., Large Win, Rear Analyst Description: Off-White, Homogeneous, Non-Fibrous, Thick GI Asbestos Types: Chrysotile <1. % Other Material: Non-fibrous 100 %	510051075-05	Yes	Trace (<1 %) ¹ (by CVES) by Ivan H Reyes on 05/07/10

See Reporting notes on last page

Client Name: Universal Environmental Consultant

PLM Bulk Asbestos Report

545 Grove St / Burr Elem; Newton

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
6 Location: 545 Grove St., Under Win, Rear	510051075-06	No	NAD (by CVES) by Ivan H Reyes on 05/07/10
Analyst Description: Brown, Homogeneous, Fibrous, Material in Metal Panel Asbestos Types: Other Material: Cellulose 95 %, Non-fibrous 5 %			
7 C Location: Burr Elementary, Front of School	510051075-07	Yes	4 % (by CVES) by Ivan H Reyes on 05/07/10
Analyst Description: White/Grey, Homogeneous, Fibrous, Win Fr Asbestos Types: Chrysotile 4.0 % Other Material: Non-fibrous 96 %			
8 Location: Burr Elementary, Front of School	510051075-08	No	NAD (by CVES) by Ivan H Reyes on 05/07/10
Analyst Description: Black, Homogeneous, Non-Fibrous, Thick Rubber Gl Asbestos Types: Other Material: Non-fibrous 100 %			
9 C Location: Burr Elementary, Rear of School	510051075-09		NA/PS
Analyst Description: Win Fr Asbestos Types: Other Material:			
10 Location: Burr Elementary, Rear of School	510051075-10	No	NAD (by CVES) by Ivan H Reyes on 05/07/10
Analyst Description: Black, Homogeneous, Non-Fibrous, Thick Rubber Gl Asbestos Types: Other Material: Non-fibrous 100 %			
11 C Location: Burr Elementary, Side of School	510051075-11		NA/PS
Analyst Description: Win Fr Asbestos Types: Other Material:			

See Reporting notes on last page

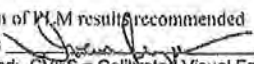
Client Name: Universal Environmental Consultant

PLM Bulk Asbestos Report

545 Grove St / Burr Elem; Newton

Reporting Notes:

(1) TEM confirmation of PLM results recommended

Analyzed by: Ivan H Reyes ; Date Analyzed: 5/7/10
NAD = no asbestos detected; CVES = Calibrated Visual Estimate; NA = not analyzed; NA/PS = not analyzed / positive stop; "Present" or NVA = "No Visible Asbestos" are observations made during a qualitative analysis; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP Lab #102079-0) or NY ELAP PLM Analysis Protocol 198.1 for New York friable samples (198.6 for NOB samples) (NY ELAP Lab # 10982); Note: PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive. TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing in New York State (also see EPA Advisory for floor tile, FR 59, 146, 38970, 8/1/94). NIST Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested.
Reviewed By: _____

510051075

STOP @ 1ST (4)
A-C

Reported By: [Signature] Date: 05/06/10 Due Date: 05/10/10
Received By: [Signature] Date: 5/8/10 16:15

Project Manual No.12-32 - Envelope Improvements at the Lower Falls Community Center
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CITY OF NEWTON, MASSACHUSETTS

PURCHASING DEPARTMENT

purchasing@newtonma.gov

Fax (617) 796-1227

December 13, 2011

ADDENDUM #1

INVITATION FOR BID #12-32

LOWER FALLS COMMUNITY CENTER IMPROVEMENTS

THIS ADDENDUM IS TO: **Postpone Opening Date to the following:**

CHANGES TO THE PROJECT MANUAL

Item No. 1: INVITATION FOR BID

Change the date and time for receipt of bid from; “10:00 a.m., December 15, 2011”, to; “10:00 a.m., December 22, 2011”.

Item No. 2: INSTRUCTIONS TO BIDDERS

Article 2 – Request for Interpretation

2.2Change from; “....if received Friday, December 9, 2011 at 12:00 noon”, to; “....if received Friday, December 16, 2011 at 12:00 noon”.

All other terms and conditions of this bid remain unchanged.

PLEASE ENSURE THAT YOU ACKNOWLEDGE THIS ADDENDUM ON YOUR BID FORM.

Thank you.



Rositha Durham

Chief Procurement Officer

CITY OF NEWTON

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ENVELOPE IMPROVEMENTS

AT THE LOWER FALLS COMMUNITY CENTER

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AT THE LOWER FALLS COMMUNITY CENTER

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8 Pages of Drawings (including cover page) may be obtained online at www.ci.newton.ma.us/bids

Effective April 14, 2010 the City of Newton, Purchasing Department is providing all Invitation For Bids (IFBs) and Plans online. Bidders may download the files from the Purchasing Department's web site listed above. Directly under the IFB # (i.e., #12-32) there will be three files: "IFB", "Plans" "Prevailing Wages". Bidders may also pick up the specifications, plans and Prevailing Wage Schedule from the Purchasing Department, Room 204 at Newton City Hall. Please call ahead for availability.

END OF SECTION

**CITY OF NEWTON
PURCHASING DEPARTMENT
INVITATION FOR BID #12-32**

The City of Newton invites sealed bids from Contractors for

**ENVELOPE IMPROVEMENTS
AT THE LOWER FALLS COMMUNITY CENTER**

Pre-bid will be held on site at: **10:00 a.m., December 8, 2011 at 545 Grove Street, Newton, MA**

Bids will be received until **10:00 a.m., December 15, 2011**

at the Purchasing Department, Room 204, Newton City Hall, 1000 Commonwealth Ave., Newton, MA 02459. Immediately following the deadline for bids all bids received within the time specified will be publicly opened and read aloud.

Work under this contract shall consist of: Removal and replacement of existing metal windows with new fiberglass windows, foundation wall repairs and perimeter insulation, concrete walk replacement, new EIFS system, limited metal studs and GWB installation, building insulation and replacement of exterior doors with new FRP doors. **Work is expected to begin on January 2, 2012 and shall be completed within 150 calendar days, but not later than May 31, 2012.**

Contract Documents will be available **online at the City's website: www.ci.newton.ma.us/bids** or for pickup at the Purchasing Department or after: **10:00 a.m., December 1, 2011.** There will be no charge for contract documents.

All General Bids must be accompanied by a copy of a "Certificate of Eligibility" (DCAM Form CQ-7) issued by the Department of Capital Asset Management and Maintenance (DCAM) and a "Contractor Update Statement" (DCAM Form CQ-3). The category of work for which the Bidder must certified is: **General Building Construction**

Award will be made to the bidder with the lowest total contract price, including any accepted alternates, that has been deemed responsible and eligible. **All bids shall be submitted as one ORIGINAL and one COPY.**

All bids must be accompanied by a bid deposit in an amount that is not less than five percent (5%) of the value of the bid, including all add alternates. Bid deposits, payable to the City of Newton, shall be either in the form of a bid bond, or cash, or a certified check, or a treasurer's or cashier's check issued by a responsible bank or trust company.

All bids are subject to the provisions of M.G.L. Chapter 149, Section 44 A-J. **Wages are subject** to minimum wage rates determined by the Massachusetts Department of Labor and Industries pursuant to M.G.L. Chapter 149, Sec. 26 to 27H. The schedule of wage rates applicable to this contract is included in the bidding documents. In addition, the prevailing wage schedule will be updated annually for all public construction projects lasting longer than one (1) year. You will be required to pay the rates set out in any updated prevailing wage schedule. Increases in prevailing wage schedules will not be the basis for change order requests. The successful bidder will be required to provide a Certificate of Insurance demonstrating current coverage of the type and amounts set forth in the Project Manual. The successful bidder will be required to furnish a **Performance and Labor and Materials Payment Bond each in the amount of 100%** of the contract total.

Bidders attention is directed to the requirements of the City of Newton Supplemental Equal Employment Opportunity, Anti-Discrimination and Affirmative Action Program and also to the Minority/Women Business Enterprise Plan, December 1999, all of which are hereby incorporated into the Contract Documents. In the event of conflict between any of the above listed policies, the stricter policy shall apply.

If you download bids from the internet website www.ci.newton.ma.us/bids I strongly suggest you email (purchasing@newtonma.gov) your company's NAME, ADDRESS, PHONE, FAX AND INVITATION FOR BID NUMBER, so that we may add you to the Bidders List and you will be notified of any/all addendums. **Plans must be obtained through the Purchasing Department.**

The City of Newton will reject any and all bids when required to do so by the above referenced General Laws. In addition, the City of Newton reserves the right to waive any informalities in any or all bids, or to reject any or all bids (in whole or in part) if it be in the public interest to do so.

CITY OF NEWTON
Rositha Durham
Chief Procurement Officer
December 1, 2011

CITY OF NEWTON
DEPARTMENT OF PURCHASING
INSTRUCTIONS TO BIDDERS

ARTICLE 1 – BIDDER’S REPRESENTATION

- 1.1. Each General Bidder (hereinafter called the “Bidder”) by making a bid (hereinafter called “bid”) represents that:
- 1.2. The Bidder has read and understands the Contract Documents and the bid is made in accordance therewith.
- 1.3. The Bidder has visited the site and is familiar with the local conditions under which the Work has to be performed.
- 1.4. Failure to so examine the Contract Documents and site will not relieve any Bidder from any obligation under the bid as submitted.

ARTICLE 2 - REQUEST FOR INTERPRETATION

- 2.1 Bidders shall promptly notify the City of any ambiguity, inconsistency, or error which they may discover upon examination of the Contract Documents, the site, and local conditions.
- 2.2 Bidders requiring clarification or interpretation of the Contract Documents shall make a written request to the *Chief Procurement Officer*, at purchasing@newtonma.gov or via facsimile (617) 796-1227. The City will answer such requests if received Friday, December 9, 2011 at 12:00 noon.
- 2.3 Interpretation, correction, or change in the Contract Documents will be made by Addendum which will become part of the Contract Documents. The City will not be held accountable for any oral instruction.
- 2.4 Addenda will be emailed to every individual or firm on record as having taken a set of Contract Documents.
- 2.5 Copies of addenda will be made available for inspection at the location listed in the Invitation for Bids where Contract Documents are on file, in addition to being available online at www.ci.newton.ma.us/bids.
- 2.6 Bidders or proposers contacting ANY CITY EMPLOYEE regarding an Invitation for Bid (IFB) or a Request for Proposal (RFP), outside of the Purchasing Department, once an IFB or RFP has been released, may be disqualified from the bidding process.
- 2.7 Bidders downloading information off the internet web site are solely responsible for obtaining any addenda prior to the bid opening. If the bidder makes themselves known to the Purchasing Dept., at purchasing@newtonma.gov or via facsimile (617) 796-1227, they shall be placed on the bidder’s list. Bidders must provide the Purchasing Dept. with their company’s name, street address, city, state, zip, phone, fax, email address and **INVITATION FOR BID #12-32**.

ARTICLE 3 – MBE PARTICIPATION

- 3.1 Notice is hereby given that the Mayor’s Affirmative Action Plan for the City of Newton, dated December 1999 is applicable to all construction contracts in excess of \$10,000.00. A copy of this plan is on file at City of Newton Purchasing Department.
- 3.2 Notice is hereby given that the City of Newton Minority/Women Business Enterprise Plan dated December 1999 and the Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program is applicable to all City contracts for goods and services in excess of \$50,000.00. Copies of these plans are incorporated in the bidding documents.

ARTICLE 4 – PREPARATION AND SUBMISSION OF BIDS

- 4.1 Bids shall be submitted on the “Bid Form” as appropriate, furnished by the City.

- 4.2 All entries on the Bid Form shall be made by typewriter or in ink.
- 4.3 Where so indicated on the Bid Form, sums shall be expressed in both words and figures. Where there is a discrepancy between the bid sum expressed in words and the bid sum expressed in figures, the words shall control.
- 4.4 Bid Deposits shall be submitted in the amount specified in the Invitation for Bids. They shall be made payable to the City of Newton and shall be either in the form of cash, certified check, treasurer's or cashier's check issued by a responsible bank or trust company, or a bid bond issued by a surety licensed to do business in the Commonwealth of Massachusetts; and shall be conditioned upon the faithful performance by the principal of the agreements contained in the bid.

Bid deposits of the three (3) lowest responsible and eligible Bidders shall be retained until the execution and delivery of the Owner/Contractor agreement.

- 4.5 The Bid, including the bid deposit shall be enclosed in a sealed envelope with the following plainly marked on the outside: GENERAL BID FOR:

NAME OF PROJECT AND INVITATION NUMBER

BIDDER'S NAME, BUSINESS ADDRESS, AND PHONE NUMBER

Date and time for receipt of bids is set forth in the Invitation for Bids.

- 4.7 Timely delivery of a bid at the location designated shall be the full responsibility of the Bidder.
- 4.8 Bids shall be submitted with one **original** and one **copy**.
- 4.9 Be advised that a new Massachusetts law has been enacted that required all employees who work on Massachusetts public works construction sites must have no less than 10 hours of OSHA-approved safety and health training. See Chapter 306 of the Acts of 2004, which will become effective July 1, 2006.
1. This requirement will apply to any general bid or sub bid submitted on or after July 1, 2006 and to any contract awarded on or after July 1, 2006.
 2. This law directs the Massachusetts Attorney General to restrain the award of construction contracts to any contractor who is in violation to this requirement and to restrain the performance of these contracts by non-complying contractors.
 3. The contractor and all subcontractors on this project will be required to provide certification of compliance with this requirement. Non-compliance with this new Massachusetts Law will disqualify you from bidding on public contracts.

ARTICLE 5 – ALTERNATES

- 5.1 Each Bidder shall acknowledge Alternates (if any) in Section C on the Bid Form.
- 5.2 In the event an Alternate does not involve a change in the amount of the base bid, the Bidder shall so indicated by writing "No Change", or "N/C" or "0" in the space provided for that Alternate.
- 5.3 Bidders shall enter on the Bid Form a single amount for each Alternate which shall consist of the amount for work performed by the Contractor.
- 5.4 The low Bidder will be determined on the basis of the sum of the base bid and the accepted alternates.

ARTICLE 6 – WITHDRAWAL OF BIDS

- 6.1 Any bid may be withdrawn prior to the time designated for receipt of bids on written or telegraphic request. Telegraphic withdrawal of bids must be confirmed over the Bidder's signature by written notice postmarked on or before the date and time set for receipt of bids.
- 6.2 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids.
- 6.3 No bids shall be withdrawn within thirty days, Saturdays, Sundays and legal holidays excluded, after the opening of the bids.

ARTICLE 7 – CONTRACT AWARD

- 7.1 The City of Newton will award the contract to the lowest eligible and responsible Bidder within thirty days, Saturdays, Sundays, and legal holidays excluded after the opening of bids.
- 7.2 The City of Newton reserves the right to waive any informalities in or to reject any or all Bids if it be in the public interest to do so.
- 7.3 As used herein, the term “lowest responsible and eligible Bidder” shall mean the Bidder (1) whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; (2) who shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (3) who, where the provisions of section eight B of chapter twenty-nine apply, shall have been determined to be qualified thereunder.
- 7.4 Subsequent to the award and within five (5) days, Saturday, Sundays and legal holidays excluded, after the prescribed forms are presented for signature, the successful Bidder shall execute and deliver to the City a Contract in the form included in the Contract Documents in such number of counterparts as the City may require.
- 7.5 In the event that the City receives low bids in identical amount from two or more responsive and responsible Bidders, the City shall select the successful Bidder by a blind selection process such as flipping a coin or drawing names from a hat. The low Bidders who are under consideration will be invited to attend and observe the selection process.

ARTICLE 8 – TAXES

- 8.1 The Bidder shall not include in this bid any tax imposed upon the sale or rental of tangible personal property in this Commonwealth, such as any and all building materials, supplies, services and equipment required to complete the work.
- 8.2 The City is exempt from payment of the Massachusetts Sales Tax, and the Bidder shall not include any sales tax on its bid. The City’s exemption Number is E-046-001-404.

END OF SECTION

CITY OF NEWTON

FORM FOR GENERAL BID #12-32

ENVELOPE IMPROVEMENTS AT LOWER FALLS COMMUNITY CENTER

TO THE AWARDING AUTHORITY:

A. The undersigned proposes to furnish all labor and materials required to install new fiberglass windows at THE LOWER FALLS COMMUNITY CENTER in Newton, Massachusetts in accordance with the accompanying plans and specifications prepared by Knight, Bagge & Anderson, Inc. for the contract price specified below, subject to additions and deductions according to the terms of the specifications.

B. This bid includes addenda number(s) _____, _____, _____, _____,

C. The proposed contract price is:

DOLLARS (\$ _____)

COMPANY: _____

D. The undersigned has completed and submits herewith the following documents:

- ☐ Bidder's Qualifications and References Form, 2 pages
- ☐ Certificate of Non-Collusion, 1 page
- ☐ Signed Bid Form, 2 pages
- ☐ Certificate of Eligibility for General Building Construction (DCAM Form CQ7)
- ☐ Update Statement (DCAM Form CQ3)
- ☐ A five percent (5%) bid deposit.

E. The undersigned agrees that each of the above named sub-bidders will be used for the work indicated at the amount stated, unless a substitution is made. The undersigned further agrees to pay the premiums for the performance and payment bonds furnished by sub-bidders as requested herein and that all of the cost of all such premiums is included in the amount set forth in Item 1 of this bid.

The undersigned agrees that if s/he is selected as general contractor, s/he will promptly confer with the awarding authority on the question of sub-bidders; and that the awarding authority may substitute for any sub-bid listed above a sub-bid filed with the awarding authority by another sub-bidder for the sub-trade against whose standing and ability the undersigned makes no objection; and that the undersigned will use all such finally selected sub-bidders at the amounts named in their respective sub-bids and be in every way as responsible for them and their work as if they had been originally named in this general bid, the total contract price being adjusted to conform thereto.

F. The undersigned agrees that, if s/he is selected as general contractor, s/he will within five days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this bid and furnish a performance bond and also a labor and materials payment bond, each of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority and each in the sum of the contract price, the premiums for which are to be paid by the general contractor and are included in the contract price.

The undersigned hereby certifies that s/he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work and that s/he will comply fully with all laws and regulations applicable to awards made subject to section forty-four A of M.G.L. Chapter 30, s 39M.

The undersigned certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration ("OSHA") that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States OSHA that is at least 10 hours in duration. The undersigned understands that any employee found on a worksite subject to this section without documentation of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal.

The undersigned further certifies that s/he intends to comply with the City of Newton Minority/Women Business Enterprise Plan, dated December 19, 1999 to further expand business opportunities for minority firms.

The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

Date : _____

(Name of General Bidder)

BY: _____
(Signature)

(Printed Name and Title of Signatory)

(Business Address)

(City, State Zip)

E-mail address

(Telephone) (FAX)

NOTE: If the bidder is a corporation, indicate state of incorporation under signature, and affix corporate seal; if a partnership, give full names and residential addresses of all partners; and if an individual, give residential address if different from business address.

END OF SECTION

CITY OF NEWTON

BIDDER'S QUALIFICATIONS AND REFERENCES FORM

All questions must be answered, and the data given must be clear and comprehensive. Please type or print legibly. If necessary, add additional sheet for starred items. This information will be utilized by the City of Newton for purposes of determining bidder responsiveness and responsibility with regard to the requirements and specifications of the Contract.

1. FIRM NAME: _____
2. WHEN ORGANIZED: _____
3. INCORPORATED? ____ YES ____ NO DATE AND STATE OF INCORPORATION: _____
4. IS YOUR BUSINESS A **MBE**? ____ YES ____ NO **WBE**? ____ YES ____ NO or **MWBE**? ____ YES ____ NO
- * 5. LIST ALL CONTRACTS CURRENTLY ON HAND, SHOWING CONTRACT AMOUNT AND ANTICIPATED DATE OF COMPLETION:

- * 6. HAVE YOU EVER FAILED TO COMPLETE A CONTRACT AWARDED TO YOU?
____ YES ____ NO
IF YES, WHERE AND WHY?

- * 7. HAVE YOU EVER DEFAULTED ON A CONTRACT? ____ YES ____ NO
IF YES, PROVIDE DETAILS.

- * 8. LIST YOUR VEHICLES/EQUIPMENT AVAILABLE FOR THIS CONTRACT:

- * 9. IN THE SPACES FOLLOWING, PROVIDE INFORMATION REGARDING CONTRACTS COMPLETED BY YOUR FIRM SIMILAR IN NATURE TO THE PROJECT BEING BID. A MINIMUM OF FOUR (4) CONTRACTS SHALL BE LISTED. PUBLICLY BID CONTRACTS ARE PREFERRED, BUT NOT MANDATORY.

PROJECT NAME: _____
OWNER: _____
CITY/STATE: _____

DOLLAR AMOUNT: \$ _____ DATE COMPLETED: _____
PUBLICLY BID? _____ YES _____ NO
TYPE OF WORK?: _____
CONTACT PERSON: _____ TELEPHONE #: (____) _____
CONTACT PERSON'S RELATION TO PROJECT?: _____
(i.e., contract manager, purchasing agent, etc.)

PROJECT NAME: _____
OWNER: _____
CITY/STATE: _____
DOLLAR AMOUNT: \$ _____ DATE COMPLETED: _____
PUBLICLY BID? _____ YES _____ NO
TYPE OF WORK?: _____
CONTACT PERSON: _____ TELEPHONE #: (____) _____
CONTACT PERSON'S RELATION TO PROJECT?: _____
(i.e., contract manager, purchasing agent, etc.)

PROJECT NAME: _____
OWNER: _____
CITY/STATE: _____
DOLLAR AMOUNT: \$ _____ DATE COMPLETED: _____
PUBLICLY BID? _____ YES _____ NO
TYPE OF WORK?: _____
CONTACT PERSON: _____ TELEPHONE #: (____) _____
CONTACT PERSON'S RELATION TO PROJECT?: _____
(i.e., contract manager, purchasing agent, etc.)

PROJECT NAME: _____
OWNER: _____
CITY/STATE: _____
DOLLAR AMOUNT: \$ _____ DATE COMPLETED: _____
PUBLICLY BID? _____ YES _____ NO
TYPE OF WORK?: _____
CONTACT PERSON: _____ TELEPHONE #: (____) _____
CONTACT PERSON'S RELATION TO PROJECT?: _____
(i.e., contract manager, purchasing agent, etc.)

10. The undersigned certifies that the information contained herein is complete and accurate and hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the City of Newton in verification of the recitals comprising this statement of Bidder's qualifications and experience.

DATE: _____ BIDDER: _____

SIGNATURE: _____

PRINTED NAME: _____ TITLE: _____

END OF SECTION

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word “person” shall mean any natural person, business, partnership, corporation, union, committee club, or other organization, entity, or group or individuals.

(Signature of individual)

Name of Business

CONTRACT FORMS

The forms are provided for informational purposes only.

The awarded bidder will be required to complete and submit the following documents in order to execute a contract pursuant to this bid.

None of the following forms are required at the time of bid submittal.

CITY - CONTRACTOR AGREEMENT

CONTRACT NO. C-

THIS AGREEMENT made this ____ day of _____ in the year Two Thousand and Eleven by and between the CITY OF NEWTON, a municipal corporation organized and existing under the laws of the Commonwealth of Massachusetts, hereinafter referred to as the CITY, acting through its Chief Procurement Officer, but without personal liability to him, and

hereinafter referred to as the CONTRACTOR.

The parties hereto for the consideration hereinafter set forth agree as follows:

ARTICLE 1. STATEMENT OF WORK. The Contractor shall furnish all labor, materials, and equipment and perform all work required in strict accordance with the Contract Documents for the following project:

Envelope Improvements at the Lower Falls Community Center

ARTICLE 2. TIME OF COMPLETION. The Contractor shall commence work under this Contract on the date specified in the written notice of the City to proceed and shall fully complete all work hereunder within the time (270 calendar days) stated elsewhere in the contract documents

ARTICLE 3. THE CONTRACT PRICE. The City shall pay the Contractor for the full and satisfactory performance of the Contract, in current funds the sum of:

ARTICLE 4. CONTRACT DOCUMENTS. The Contract Documents consist of the following documents which are either attached to this Agreement or are incorporated herein by reference:

- a. This CITY-CONTRACTOR Agreement
- b. The City's Invitation For Bid #12-32 issued by the Purchasing Department;
- c. The Project Manual for Envelope at Lower Falls Community Center including the Instructions to Bidders; General Conditions; Special Conditions; MWBE/AA Requirements, Wage Rate Requirements and Wage Rate Schedule(s) including any updated prevailing wage rate schedules if applicable; The Supplementary Special Conditions; General Requirements and Project Specifications; and Drawings, if included or referenced therein;
- d. Addenda Number(s) N/A ;
- e. The Bid Response of the CONTRACTOR submitted for this Project and accompanying documents and certifications;
- f. Certificate(s) of Insurance and surety bond(s) submitted by the CONTRACTOR in connection with this Project;
- g. Duly authorized and executed Amendments, Change Orders or Work Orders issued by the CITY after execution of this CITY-CONTRACTOR Agreement.

This CITY-CONTRACTOR Agreement, together with the other documents enumerated in this Article, constitute the entire Agreement between the CITY and the CONTRACTOR.

ARTICLE 5. ALTERNATES. The following Alternates have been accepted and their costs are included in the Contract Price stated in Article 3 of this Agreement:

Alternates: _____

ARTICLE 6. APPLICABLE STATUTES. All applicable federal, state and local laws and regulations are incorporated herein by reference and the Contractor agrees to comply with same.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed under seal the day and year first above written.

CONTRACTOR

By _____
Title _____

Date _____

Affix Corporate Seal Here

City funds are available in the following accounts:

19A11511-52407 -
38E11504-5825 -

I further certify that the Mayor, or his
designee, is authorized to execute contracts
and approve change orders

By _____
Comptroller of Accounts

Date _____

CITY OF NEWTON

By _____
Chief Procurement Officer

Date _____

By _____
Commissioner of Public Buildings

Date _____

Approved as to Legal Form and Character

By _____
Associate City Solicitor

Date _____

CONTRACT AND BONDS APPROVED

By _____
Mayor or his designee

Date _____

CERTIFICATE OF AUTHORITY - CORPORATE

1. I hereby certify that I am the Clerk/Secretary of _____
(insert full name of Corporation)
2. corporation, and that _____
(insert the name of officer who signed the **contract and bonds.**)
3. is the duly elected _____
(insert the title of the officer in line 2)
4. of said corporation, and that on _____
(insert a date that is ***ON OR BEFORE*** the date the officer signed the **contract and bonds.**)

at a duly authorized meeting of the Board of Directors of said corporation, at which all the directors were present or waived notice, it was voted that

5. _____ the _____
(insert **name** from line 2) (insert **title** from line 3)

of this corporation be and hereby is authorized to execute contracts and bonds in the name and on behalf of said corporation, and affix its Corporate Seal thereto, and such execution of any contract of obligation in this corporation's name and on its behalf, with or without the Corporate Seal, shall be valid and binding upon this corporation; and that the above vote has not been amended or rescinded and remains in full force and effect as of the date set forth below.

6. ATTEST: _____ *AFFIX CORPORATE*
(Signature of **Clerk or Secretary**)* *SEAL HERE*
7. Name: _____
(Please print or type name in line 6)*
8. Date: _____
(insert a date that is ***ON OR AFTER*** the date the officer signed the **contract and bonds.**)

* The name and signature inserted in lines 6 & 7 must be that of the Clerk or Secretary of the corporation.

ATTESTATION

Pursuant to MG c. 62C, § 49A, the undersigned acting on behalf of the Contractor, certifies under the penalties of perjury that, to the best of the undersigned's knowledge and belief, the Contractor is in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.*

**Signature of Individual
or Corporate Contractor (Mandatory)

*** Contractor's Social Security Number
(Voluntary) or Federal Identification Number

By: _____
Corporate Officer
(Mandatory, if applicable)

Date: _____

* The provision in the Attestation relating to child support applies only when the Contractor is an individual.

** Approval of a contract or other agreement will not be granted unless the applicant signs this certification clause.

*** Your social security number will be furnished to the Massachusetts Department of Revenue to determine whether you have met tax filing or tax payment obligations. Providers who fail to correct their non-filing or delinquency will not have a contract or other agreement issued, renewed, or extended. This request is made under the authority of GL c. 62C, § 49A.

CITY OF NEWTON, MASSACHUSETTS

PERFORMANCE BOND

Know All Men By These Presents:

That we, _____, as PRINCIPAL, and
, as SURETY, are held and firmly bound unto the City of Newton as Obligee, in the sum of _____ dollars (\$ _____) to be paid to the Obligee, for which payments well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the said PRINCIPAL has made a contract with the Obligee, bearing the date _____ of _____, 20____, for the construction of _____
(Project Title)
in Newton, Massachusetts.

Now, the condition of this obligation is such that if the PRINCIPAL and all Sub-contractors under said contract shall well and truly keep and perform all the undertakings, covenants, agreements, terms and conditions of said contract on its part to be kept and performed during the original term of said contract and any extensions thereof that may be granted by the Obligee, with or without notice to the SURETY, and during the life and any guarantee required under the contract, and shall also well and truly keep and perform all the undertakings, covenants, agreements, terms and conditions of any and all duly authorized modifications, alterations, changes or additions to said contract that may hereafter be made, notice to the SURETY of such modifications, alterations, changes or additions being hereby waived, then this obligation shall become null and void; otherwise, it shall remain in full force, virtue and effect.

In the event, that the contract is abandoned by the PRINCIPAL, or in the event that the Obligee terminates the employment of the PRINCIPAL or the authority of the PRINCIPAL to continue the work said SURETY hereby further agrees that said SURETY shall, if requested in writing by the Obligee, take such action as is necessary to complete said contract.

In Witness Whereof, the PRINCIPAL and SURETY have hereto set their hands and seals this _____ day of _____, 20____.

PRINCIPAL

SURETY

BY _____
(SEAL)

BY _____
(ATTORNEY-IN-FACT) (SEAL)

(Title)

ATTEST: _____

ATTEST: _____

CITY OF NEWTON, MASSACHUSETTS

PAYMENT BOND

Know All Men By These Presents:

That we, _____, as PRINCIPAL, and
_____, as SURETY, are held and firmly bound unto the City of Newton as Obligee, in
the sum of _____ dollars (\$_____) to be paid to the
Obligee, for which payments well and truly to be made, we bind ourselves, our respective heirs, executors, administrators,
successors and assigns, jointly and severally, firmly by these presents.

Whereas, the said PRINCIPAL has made a contract with the Obligee, bearing the date _____
of _____, 20____, for the construction of _____
(Project Title)
in Newton, Massachusetts.

Now, the conditions of this obligation are such that if the PRINCIPAL and all Sub-contractors under said contract shall pay for
all labor performed or furnished and for all materials used or employed in said contract and in any and all duly authorized
modifications, alterations, extensions of time, changes or additions to said contract that may hereafter be made, notice to the
SURETY of such modifications, alterations, extensions of time, changes or additions being hereby waived, the foregoing to include
any other purposes or items set out in, and to be subject to, provisions of M.G.L. c. 30, sec. 39A, and M.G.L. c. 149 sec. 29, as
amended, then this obligation shall become null and void; otherwise it shall remain in full force, virtue and effect.

In Witness Whereof, the PRINCIPAL and SURETY have hereto set their hands and seals this _____ day of _____
,20____.

PRINCIPAL

SURETY

BY _____
(SEAL)

BY _____
(ATTORNEY-IN-FACT) (SEAL)

(Title)

ATTEST: _____

ATTEST: _____

END OF SECTION

**GENERAL CONDITIONS
OF THE CONTRACT
FOR NON-TECHNICAL SERVICES**

The City of Newton, herein referred to as the City, does hereby establish the following General Conditions, applicable to this Invitation for Bids and any subsequent purchase order, work order, or contract resulting therefrom.

1.0 SCOPE OF SERVICES

- 1.1 The Contractor agrees to furnish all labor, materials, equipment and insurance necessary to perform and fully complete, in every respect, within the time frame herein specified, all work (hereinafter referred as the Services) described in the Project Manual.
- 1.2 The Contractor shall not make any changes in the scope of Services without the prior written consent of the City. The Contractor shall make reasonable revisions or corrections, within the scope of Services, to any work performed until submitted in a form acceptable to the City.
- 1.3 The City reserves the right to alter, add to or reduce the Services by delivering to the Contractor written notice specifying the nature and extent of such alteration, addition or reduction. Such notice shall be effective upon the later of actual receipt by the Contractor or upon the date given in such notice. No addition to the Services shall be made unless the City and the Contractor have agreed to such increase in writing.

2.0 CONTRACT TERM

- 2.1 The obligations of the Contractor identified herein shall commence upon execution of the City-Contractor Contract and shall continue in full force and effect for the duration of the contract term as identified in the Project Manual. The contractor shall commence the performance of services under this contract promptly upon receipt of the City's Notice to Proceed in accordance with the provisions identified in the Project Manual.
- 2.2 In the event the term of this contract exceeds a period of one year and notwithstanding any provision to the contrary herein, the City shall cancel this contract in the event that funds are not appropriated or otherwise made available to support continuation of performance by the Contractor in any fiscal year succeeding the first year.

3.0 EXECUTION

- 3.1 All work required hereunder shall be performed as promptly as possible, and in any event within the time herein set forth, and such work shall be subject to approval and acceptance by the City, but such approval and acceptance shall not relieve the Contractor from the obligation to correct any incomplete, inaccurate or defective work, all of which shall be promptly remedied by the Contractor on demand, without cost to the City. The Contractor shall obtain all the required licenses and permits for the work herein described.
- 3.2 The Contractor shall conform to all determinations and directions of the City concerning the Contractor's delivery of services in the event of inclement weather, equipment failure, picket lines on City property, or labor strikes by the contractor's employees.

4.0 COMPENSATION

- 4.1 The City shall pay the Contractor for services rendered under this contract in accordance with the amount(s) set forth in the Contractor's General Bid Form and pursuant to the provisions contained in the Project Manual.
- 4.2 Notwithstanding anything to the contrary contained in the Contract, the City may withhold any payment to the Contractor hereunder if and for so long as the Contractor fails to perform any of its obligations hereunder or otherwise is in default under this Contract including, without limitation, any failure to perform Services in full accordance with the amount sufficient in the reasonable opinion of the City to cure any such default or failure of performance by the Contractor.
- 4.3 In no event shall the City be required to pay any amounts for work deemed by it to be unacceptable, or which are otherwise disputed. In the event the City disputes any such amounts invoiced, it shall pay all amounts not in dispute and notify the Contractor in writing of the amounts disputed and the reasons therefor.

4.4 No payment made shall constitute or be construed as final acceptance or approval of that part of the Services to which payment relates, or relieve the Contractor of any of its obligations outlined in this Contract. Further, the City shall not be deemed, by virtue of making payments to the Contractor hereunder, to have released the Contractor from any claim or liability, or to have waived any action arising out of the breach of this Contract by the Contractor.

5.0 REPORTS AND DRAWINGS

When the Contractor has been paid for the Services performed by him or her, all reports, drawings, and other material furnished to the City shall become the City's property and may be used by the City (or such parties as the City may designate) thereafter in such manner and for such purposes as the City (or such parties as the City may designate) may deem advisable, without further employment of or additional compensation to the Contractor. The Contractor shall not release or disclose any report, drawing, or other material furnished to the Contractor by the City in connection with the performance of the Contractor's Services

6.0 CONTRACTOR'S ACCOUNTING RECORDS

The Contractor shall keep records pertaining to Services performed (including complete and detailed time records) on the basis of recognized bookkeeping practices, generally accepted accounting principles, and in accordance with such reasonable requirements to facilitate audit as the City may provide. All records shall be available to the City or its authorized representatives for review and audit during normal business hours.

7.0 ASSIGNMENT/SUBCONTRACTING

The Contractor agrees that he will not sell, assign or transfer this Contract or any part thereof or interest therein without the prior written consent of the City.

8.0 REMEDY FOR DEFAULT

If the Contractor, in the sole judgment of the City, shall violate or fail properly to comply with or perform in any material respect any condition, provision, or warranty hereof, the City shall have the right by prior written notice to the Contractor to have the services called for hereby otherwise performed, and/or to terminate this contract without prejudice to any other rights or remedies of the City under this contract. The Contractor shall pay any excess in the City's cost to so procure the services and any related goods, supplies, materials or equipment. In addition, and without limiting any other remedies available to the City, the Contractor shall be liable for all losses, costs and expenses incurred by the City which result from the Contractor's noncompliance.

9.0 SUSPENSION OR TERMINATION

9.1 The City shall have the right, upon seven (7) days written notice to the Contractor so stating, to terminate, suspend, or postpone this contract in whole or in part for any reason deemed by the City to be in the public interest. Any such termination, suspension, or postponement shall not give rise to any cause of action for damages against the City. In the event that the City postpones or suspends the Services, the Contractor's time for performance of the Services shall be extended for a period equal to the period of such postponement or suspension. In the event of termination, suspension or postponement, the City shall pay: (a) for services and any related goods, supplies, materials and equipment furnished up to the time of termination, suspension, or postponement at the contract price upon delivery; (b) for work in process in the amount of the Contractor's cost, determined in accordance with ordinary accepted accounting practices, up to the time of termination, suspension, or postponement; and (c) for raw materials purchased by the Contractor as of the date of termination, suspension, or postponement and which are noncancelable at the Contractor's actual cost plus reasonable handling charges, but only to the extent that such raw materials were purchased in reliance upon this contract and are useful solely with respect to this contract.

9.2 Upon receipt of a notice of termination, suspension, or postponement the Contractor shall immediately cease all work hereunder and cancel all orders placed with respect to this contract. The Contractor's failure to so cancel shall relieve the City of the obligations of paragraph 10.1 above.

9.3 The City may postpone, suspend or terminate the Services immediately, by notice, hand delivery or certified mail, if the Contractor violates any of the provisions of this Contract, or fails to perform or observe any of the terms, covenants or conditions of this Contract, or abandons in whole or in part its Services, or becomes unable to perform its Services.

9.4 In the event of termination of this Contract, the Contractor shall promptly deliver to the City all documents, work papers, calculations, computer programs, data, drawings, plans, and other tangible work product, or materials pertaining to the Services performed under this Contract to the time of termination.

10.0 NOTICE

Any action, notice or request required to be taken, given or made by City or the Contractor hereunder may be taken, given or made only by those persons identified for that purpose on the Contract Form. All notices required to be given hereunder shall be deemed properly given if personally delivered, or if mailed by registered or certified mail, postage prepaid addressed to the address and officer identified on the Contract Form.

11.0 PROTECTION OF PROPERTY

The Contractor shall take all reasonable precautions to prevent damage to property, visible and concealed, and shall restore to substantially the same condition existing prior to the Contractor's entry any disturbance or damage to property caused by the Contractor or any person acting under its control.

12.0 INSURANCE REQUIREMENTS

12.1 The Contractor shall provide insurance coverage as listed below. This insurance shall be provided at the Contractor's expense and shall be in full force and effect during the full term of this Contract.

WORKER'S COMPENSATION

Worker's Compensation:	Per M.G.L. c.. 149, s. 34 and c.. 152 as amended.
------------------------	---

COMMERCIAL GENERAL LIABILITY

Personal Injury	\$500,000 each occurrence \$1,000,000 aggregate
Property Damage	\$500,000 each occurrence \$1,000,000 aggregate

VEHICLE LIABILITY

Personal Injury	\$500,000 each person \$1,000,000 aggregate
Property Damage	\$300,000

12.2 The City shall be named as additional insureds on the Contractor's Liability Policies.

12.3 The Contractor shall not commence the work until proof of compliance with this Section 13.0 has been furnished to the City by submitting one copy of a properly endorsed insurance certificate issued by a company authorized to write insurance in the Commonwealth. This certificate shall indicate that the contractual liability coverage is in force.

12.4 The Contractor shall file the original and one certified copy of all policies with the City within fifteen (15) days after contract award. If the City is damaged by the Contractor's failure to maintain such insurance and to so notify the City, then the Contractor shall be responsible for all reasonable costs attributable thereto.

12.5 Cancellation of any insurance required by this contract, whether by the insurer or the insured, shall not be valid unless written notice thereof is given by the party proposing cancellation to the other party and City at least thirty days prior to the effective date thereof, which shall be expressed in said notice.

13.0 CONFLICT OF INTEREST

No member, agent or employee of the City shall , during his/her tenure or one year thereafter directly or indirectly, have any interest in any property to be included in, or any contract for property, materials or services to be furnished or used in connection with, this contract or the proceeds thereof.

14.0 COMPLIANCE WITH LAWS

All work to be performed and wages paid under this specification shall be in accordance with all applicable laws, state or federal, and all applicable ordinances, codes, rules, and regulations of the City of Newton, or any public board or office having any jurisdiction, regulation or control over any work to be done hereunder, including minimum wage rates. In particular, without limitation, the Contractor agrees to comply with all regulations pertaining to approvals for federal and state grants, and with all federal and state environmental laws and regulations. The Contractor agrees to assist in making any submissions to federal or state agencies as may be required in order to meet the requirements in this paragraph.

15.0 INDEMNIFICATION

The Contractor agrees to indemnify and save the City harmless from and against any and all costs, losses, expenses, liabilities, damages or claims for damages, including reasonable attorney's fees and expenses, on account of any injury or damage to buildings, improvements, or property of the City or on account of any injury (including death) or damage to any person, persons, firm, corporation or association, or on account of any infringement or claim of infringement of patents, arising out of or resulting from the deliveries provided for or performed under this contract or from any act, omission or negligence of the contractor, his agents, employees, or assigns. The foregoing provisions shall not be deemed to be released, waived or modified in any respect by reason of any surety or insurance provided by the contractor under contract.

16.0 FORCE MAJEURE

The City may not hold the Contractor liable for any loss, expense or damage incurred by the City on account of failure of the Contractor to deliver services as specified herein, if that failure is caused by state of war, acts of enemies, expropriation or confiscation of facilities used by the Contractor, or compliance with any law, order, or regulation of any federal, state or municipal governmental authority, if the Contractor shall show that such compliance would impair this ability to perform a material provision of this contract, the Contractor having given the City reasonable notice of such cause.

17.0 DISPUTES

All claims, disputes and other matters in question between the City and the Contractor arising out of or relating to this Contract or the breach of it, shall be submitted for resolution to a court of competent jurisdiction in Massachusetts, unless otherwise agreed by the parties. No such action shall be brought, however, until the completion of all Services under this Contract or the earlier termination of this Contract as provided herein, the parties agreeing to negotiate any claims, disputes or other matters in question during the term of this Contract before resorting to litigation. As to all acts or failures to act by either party to this Contract, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events when the other party becomes aware or should have been aware of such acts or failure to act.

18.0 GOVERNING LAW

This contract shall be governed by and construed in accordance with Massachusetts Law.

19.0 LIABILITY

The Contractor is retained solely for the purpose of and to the extent set forth in this Contract. The Contractor's relationship to the City for the purpose of services to be performed under this Contract shall be that of an independent contractor. The Contractor shall have no capacity or authority to involve the City in any contract or to incur any liability on behalf of the City. In no event shall the City be held liable as an employer or otherwise for any personal injury to or death of the Contractor's principals, employees, agents and/or representatives occasioned by or resulting from the Contractor's performance under this Contract.

20.0 LIENS

The Contractor shall cause to be removed from the property of the City any liens or other claims asserted by any person or entity claiming through or under the Contractor and arising out of Services performed under this Contract by such third party.

21.0 SEVERABILITY

In the event that any portion of this Contract is held illegal or unenforceable by a court of competent jurisdiction, the parties agree that such invalidity shall not affect the validity of the remaining portions of this Contract and Contractor and the City agree to substitute for the invalid provision a valid provision which most closely approximates the economics and intent of the invalid provision.

END OF SECTION

**PUBLIC BUILDING MAINTENANCE CONTRACT
SUPPLEMENTAL CONDITIONS
COMMONWEALTH OF MASSACHUSETTS & CITY OF NEWTON**

Article 1 - Method of Paying Subcontractors
(MGL. C.30, s.39F)

Article 2 - Method of Paying General Contractors
(MGL. C.30, s.39K)

Article 3 - Claims for Unforeseen Conditions
(MGL. C.30, s.39N)

Article 4 - Claims for Delay
(MGL. C.30, s.39O)

Article 5 - Decisions and Approvals by Engineer
or Architect
(MGL. C.30, s.39P)

Article 6 - Preference in Employment, Wages
(MGL. C.149, s.26)

Article 7 - Hours of Work
(MGL. C.149, s.34)

Article 8 - Work by Foreign Corporations
(MGL. C.30, s.39L)

SPECIAL CONDITIONS - COMMONWEALTH OF MASSACHUSETTS

Article 1. METHOD OF PAYING SUBCONTRACTORS

(General Laws, Chapter 30, Section 39F as most recently amended by Chapter 450, §76 of the Acts of 1996)

(1.) Every contract awarded pursuant to section forty-four A to L, inclusive, of chapter one hundred and forty-nine shall contain the following subparagraphs (a) through (i) and every contract awarded pursuant to section thirty-nine M of chapter thirty shall contain the following subparagraphs (a) through (h) and in each case those subparagraphs shall be binding between the general contractor and each subcontractor.

(a) Forthwith after the general contractor receives payment on account of a periodic estimate, the general contractor shall pay to each subcontractor the amount paid for the labor performed and the materials furnished by the subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(b) Not later than the sixty-fifth day after each subcontractor substantially completes his work in accordance with the plans and specifications, the entire balance due under the subcontract less amounts retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the subcontractor; and the awarding authority shall pay that amount to the general contractor. The general contractor shall forthwith pay to the subcontractor the full amount received from the awarding authority less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(c) Each payment made by the awarding authority to the general contractor pursuant to subparagraphs (a) and (b) of this paragraph for the labor performed and the materials furnished by a subcontractor shall be made to the general contractor for the account of that subcontractor, and the awarding authority shall take reasonable steps to compel the general contractor to make each such payment to each such subcontractor. If the awarding authority has received a demand for direct payment from a subcontractor for any amount which has already been included in a payment to the general contractor or which is to be included in a payment to the general contractor for payment to the subcontractor as provided in subparagraphs (a) and (b), the awarding authority shall act upon the demand as provided in this section.

(d) If, within seventy days after the subcontractor has substantially completed the subcontract work, the subcontractor has not received from the general contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, the subcontractor may demand direct payment of the balance from the awarding authority. The demand shall be by a sworn statement delivered to or sent by certified mail to the awarding authority, and a copy shall be delivered to or sent by certified mail to the general contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth day after the subcontractor has substantially completed the subcontract work. Within ten days after the subcontractor has delivered or so mailed the demand to the awarding authority and delivered or so mailed a copy to the general contractor, the general contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the awarding authority and a copy shall be delivered to or sent by certified mail to the subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor and of the amount due for each claim made by the general contractor against the subcontractor.

(e) Within fifteen days after receipt of the demand by the awarding authority, but in no event prior to the seventieth day after substantial completion of the subcontract work, the awarding authority shall make direct payment to the subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount (i) retained by the awarding authority as the estimated cost of completing the incomplete or unsatisfactory items of work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the general contractor in the sworn reply; provided, that the awarding authority shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by subparagraph (d). The awarding authority shall make further direct payments to the subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this subparagraph.

(f) The awarding authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of subparagraph (e) in an interest-bearing joint account in the names of the general contractor and the subcontractor in a bank in Massachusetts selected by the awarding authority or agreed upon by the general contractor and the subcontractor and shall notify the general contractor and the subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the

amount in the account, including accrued interest, as provided in an agreement between the general contractor and the subcontractor or as determined by a decree of a court of competent jurisdiction.

(g) All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account for accounts in a bank pursuant to subparagraph (f) shall be made out of amounts payable to the general contractor at the time of receipt of a demand for direct payment from a subcontractor and out of amounts which later become payable to the general contractor and in the order of receipt of such demands from subcontractors. All direct payments shall discharge the obligation of the awarding authority to the general contractor to the extent of the such payment.

(h) The awarding authority shall deduct from payments to a general contractor amounts which, together with the deposits in interest-bearing accounts pursuant to subparagraph (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from subcontractors. All such amounts shall be earmarked for such direct payments, and the subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the general contractor.

(i) If the subcontractor does not receive payment as provided in subparagraph (a) or if the general contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the subcontractor and the subcontractor does not receive payment for same when due less the deductions provided for in subparagraph (a), the subcontractor may demand direct payment by following the procedure in subparagraph (d) and the general contractor may file a sworn reply as provided in that same subparagraph. A demand made after the first day of the month following that for which the subcontractor performed or furnished the labor and materials for which the subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the general contractor. Thereafter the awarding authority shall proceed as provided in subparagraph (e), (f), (g) and (h).

Article 2. METHOD OF PAYING GENERAL CONTRACTORS

(General Laws, Chapter 30, Section 39K as most recently amended by Chapter 145 of the Acts of 1991 and Chapter 151 of the Acts of 1993.)

Every contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building by the commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount is more than five thousand dollars in the case of the commonwealth and more than two thousand dollars in the case of any county, city, town, district, board, commission or other public body, shall contain the following paragraph:--Within fifteen days (forty-five days in the case of the commonwealth, including local housing authorities) after receipt from the contractor, at the place designated by the awarding authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the awarding authority will make a periodic payment to the contractor for the work performed during the preceding month and for the materials not incorporated in the work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, less (1) a retention based on its estimate of the fair value of its claims against the contractor and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and less (3) a retention not exceeding five per cent of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five days after (a) the contractor fully completes the work or substantially completes the work so that the value of the work remaining to be done is, in the estimate of the awarding authority, less than one per cent of the original contract price, or (b) the contractor substantially completes the work and the awarding authority takes possession for occupancy, whichever occurs first, the awarding authority shall pay the contractor the entire balance due on the contract less (1) a retention based on its estimate of the fair value of its claims against the contractor and of the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, or based on the record of payments by the contractor to the subcontractors under this contract if such record of payment indicates that the contractor has not paid subcontractors as provided in section thirty-nine F. If the awarding authority fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days (twenty-four days in the case of the commonwealth) after receipt of such a periodic estimate from the contractor, at the place designated by the awarding authority if such a place is so designated. The contractor agrees to pay to each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

The awarding authority may make changes in any periodic estimate submitted by the contractor and the payment due on said periodic estimate shall be computed in accordance with the changes so made, but such changes or any requirement for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the

amount of the periodic payment computed in accordance with the changes made, as provided herein; provided, that the awarding authority may, within seven days after receipt, return to the contractor for correction, any periodic estimate which is not in the required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter. The provisions of section thirty-nine G shall not apply to any contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building to which this section applies.

All periodic estimates shall be submitted to the awarding authority, or to its designee as set forth in writing to the contractor, and the date of receipt by the awarding authority or its designee shall be marked on the estimate. All periodic estimates shall contain a separate item for each filed subtrade and each sub-subtrade listed in sub-bid form as required by specifications and a column listing the amount paid to each subcontractor and sub-subcontractor as of the date the periodic estimate is filed. The person making payment for the awarding authority shall add the daily interest provided for herein to each payment for each day beyond the due date based on the date of receipt marked on the estimate.

A certificate of the architect to the effect that the contractor has fully or substantially completed the work shall, subject to the provisions of section thirty-nine J, be conclusive for the purposes of this section.

Article 3. CLAIMS FOR UNFORESEEN CONDITIONS

(General Laws, Chapter 30, Section 39N as most recently amended by Chapter 774 of the Acts of 1972)

Every contract subject to section forty-four A of chapter one hundred and forty-nine or subject to section thirty-nine M of chapter thirty shall contain the following paragraph in its entirety and an awarding authority may adopt reasonable rules or regulations in conformity with that paragraph concerning the filing, investigation and settlement of such claims:

If, during the progress of the work, the contractor or the awarding authority discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the contract documents either the contractor or the contracting authority may request an equitable adjustment in the contract price of the contract applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a contractor, or upon its own initiative, the contracting authority shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost of performance of the work or a change in the construction methods required for the performance of the work which results in an increase or decrease in the cost of the work, the contracting authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly.

Article 4. CLAIMS FOR DELAY

(General Laws, Chapter 30, Section 390 as added by Chapter 116 of the Acts of 1973)

Every contract subject to the provisions of section thirty-nine M of this chapter or subject to section forty-four A of chapter one hundred forty-nine shall contain the following provisions (a) and (b) in their entirety and, in the event a suspension, delay, interruption or failure to act of the awarding authority increases the cost of performance to any subcontractor, that subcontractor shall have the same rights against the general contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the general contractor against the awarding authority, but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the general contractor or the subcontractor may have against each other.

(a) The awarding authority may order the general contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the awarding authority; provided however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the awarding authority to act within the time specified in this contract, the awarding authority shall make an adjustment in the contract price for any increase in the cost of performance of this contract but shall not include any profit to the general contractor on such increase; and provided further, that the awarding authority shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this contract provides for an equitable adjustment of the contract price under any other contract provisions.

(b) The general contractor must submit the amount of a claim under provision (a) to the awarding authority in writing, as soon as practicable after the end of the suspension, delay, interruption of failure to act and, in any event, not later than the date of final payment under this contract and, except for costs due to a suspension order, the awarding authority shall not approve any costs in the claim incurred more than twenty days before the general contractor notified the awarding authority in writing of the act of failure to act involved in the claim.

Article 5. DECISIONS AND APPROVALS BY ENGINEER OR ARCHITECT

(General Laws, Chapter 30, Section 39P, as added by Chapter 1164 of the Acts of 1973)

Every contract subject to section thirty-nine M of this chapter or section forty-four A of chapter one hundred forty-nine which requires the awarding authority, any official, its architect or engineer to make a decision on interpretation of the specifications, approval of equipment, material or any other approval, or progress of the work, shall require that the decision be made promptly and, in any event, no later than thirty days after the written submission for decision; but if such decision requires extended investigation and study, the awarding authority, the official, architect or engineer shall, within thirty days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty day period and the date by which the decision will be made.

Article 6. PREFERENCE IN EMPLOYMENT, WAGES

(General Laws, Chapter 149 Section 26 as most recently amended by Chapter 665 of the Acts of 1986 and Chapter 552 of the Acts of 1991).

In the employment of mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works by the commonwealth, or by a county, town or district, or by persons contracting or subcontracting for such works, preference shall first be given to citizens of the commonwealth who have been residents of the commonwealth for at least six months at the commencement of their employment who are male veterans as defined in clause Forty-third of section seven of chapter four, and who are qualified to perform the work to which the employment relates; and secondly, to citizens of the commonwealth generally who have been residents of the commonwealth for at least six months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, and every contract for such work shall contain a provision to this effect. Each county, town or district in the construction of public works, or persons contracting or subcontracting for such works, shall give preference to veterans and citizens who are residents of such county, town or district. The rate per hour of the wages paid to said mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works shall not be less than the rate or rates of wages to be determined by the commissioner as hereinafter provided; provided, that the wages paid to laborers employed on said works shall not be less than those paid to laborers in the municipal service of the town or towns where said works are being constructed; provided, further, that where the same public work is to be constructed in two or more towns, the wages paid to laborers shall not be less than those paid to laborers in the municipal service of the town paying the highest rate; provided, further, that if, in any of the towns where the works are to be constructed, a wage rate or wage rates have been established in certain trades and occupations by collective agreements or understandings in the private construction industry between organized labor and employers, the rate or rates to be paid on said works shall not be less than the rates so established, provided, further that in towns where no such rate or rates have been so established, the wages paid to mechanics and apprentices, teamster, chauffeurs and laborers on public works, shall not be less than the wages paid to the employees in the same trades and occupations by private employers engaged in the construction industry. This section shall also apply to regular employees of the commonwealth or of a county, town or district, when such employees are employed in the construction, addition to or alteration of public buildings for which special appropriation of more than One Thousand Dollars are provided. Payments by employers to health and welfare plans, pension plans and supplementary unemployment benefit plans under collective bargaining agreements or understandings between organized labor and employers shall be included for the purpose of establishing minimum wage rates as herein provided.

Article 7. HOURS OF WORK

(General Laws, Chapter 149 Section 34 as most recently amended by Chapter 552 of the Acts of 1991).

Every contract, except for the purchase of material or supplies, involving the employment of laborers, workmen, mechanics, foremen or inspectors, to which the commonwealth or any county or town, subject to section thirty, is a party, shall contain a stipulation that no laborer, workman, mechanic, foreman or inspector working within the commonwealth, in the employ of the contractor, subcontractor or other person doing or contracting to do the whole or a part of the work contemplated by the contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or

more than six days in any one week, except in case of emergency, or, in case any town subject to section thirty-one is a party to such a contract, more than eight hours in any one day, except as aforesaid, provided, that in contracts entered into by the department of highways for the construction or reconstruction of highways there may be inserted in said stipulation a provision that said department, or any contractor or subcontractor for said department, may employ laborers, workmen, mechanics, foremen and inspectors for more than eight hours in any one day in such construction or reconstruction when, in the opinion of the commissioner of labor and industries, public necessity so requires. Every such contract not containing the aforesaid stipulation shall be null and void.

Article 8. WORK BY FOREIGN CORPORATIONS

(General Laws, Chapter 30 Section 39L, as most recently amended by Chapter 3 of the Acts of 1967).

The Commonwealth and every county, city, town, district, board, commission or other public body which, as the awarding authority, requests proposals, bids or subbids for any work in the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or other public works (1) shall not enter into a contract for such work with, and shall not approve as a subcontractor furnishing labor and materials for a part of any such work, a foreign corporation which has not filed with such awarding authority a certificate of the state secretary stating that such corporation has complied with sections three and five of chapter one hundred and eighty-one and the date of such compliance, and (2) shall report to the state secretary and to the department of corporations and taxation any foreign corporation performing work under such contract or subcontract, and any person, other than a corporation, performing work under such contract or subcontract, and residing or having a principal place of business outside the Commonwealth.

END OF SECTION

BUILDING MAINTENANCE SERVICE CONTRACT

SPECIAL CONDITIONS

The following provisions supplement the General Conditions of the Contract for Non-Technical Services. In the event of conflict or discrepancy between the General Conditions and these Special Conditions, the provisions of the Special Conditions shall govern.

1.0 SUMMARY OF WORK

- A. The Work under the Contract consists of:
 - 1. Furnishing all labor, materials, tools, equipment and supervision necessary to accomplish the work described herein, in accordance with all specifications and requirements of the Project Manual.
 - 2. All work either shown on the Drawings (if any) or included in the specifications unless specifically indicated as not to be done.
- B. In addition, the work under the Contract includes:
 - 1. Work outside the Project Site as called for in the Contract Documents and as required for the performance of the Work.
 - 2. The restoration of any items damaged or destroyed by encroaching upon areas outside the Project Site.
 - 3. Providing and restoring, where appropriate, all temporary facilities.
- C. The Proposed Contract Price shall be complete costs, including overhead, profit, insurance, transportation, and all other costs connected with, or incidental to, the work described.

2.0 PROJECT SITE

- A. The areas of work for this contract shall be various buildings within the City of Newton as specified on Work Orders to be issued from time to time during the term of this Contract.

3.0 NOTICE TO PROCEED/FAILURE TO COMMENCE WORK

- A. From time to time during the term of this Contract, the Contractor shall be issued notice to proceed in the form of a written Work Order issued by the Public Building Department listing specific work items to be performed in accordance with this Contract. The Contractor shall commence performance of the work within the time specified in the Work Order, and in no event within less than the time limits stated in the Work Specifications contained in the Project Manual.
- B. In the event the contractor fails to commence performance within the specified time, and/or notifies the City of its inability to do so, the City shall call upon the second Contractor awarded pursuant to this bid (if any) to perform the required work.
- C. In the event the second Contractor awarded pursuant to this bid is unable to commence performance within the required time, or if there is no second Contractor, the City reserves the right to contract for the work on the open market at the then prevailing rate and to deduct from any monies due or that may thereafter become due to the contractor the difference between the price stated for the work in the contract and the actual cost thereof to the City.
- D. In the event of Contractor's repeated failure to commence work within the time required by these specifications, the City shall exercise all provisions contained in the General Conditions regarding default, suspension or termination of this contract.

4.0 PAYMENT

- A. Once each month, on a date established by the City, the Contractor may submit an Application for Payment (Invoice) for the work performed during the preceeding month. The Contractor may invoice for all Work Orders completed and accepted during the preceeding month, and for all Work Orders either partially completed or not yet accepted by the City.

- B. Upon receipt of the Application for Payment, the City will, within fifteen days, make payment in full for all Work Orders completed and accepted during the preceeding month. For Work Orders partially completed or not yet accepted, the City will make payment for the value of the Work Order completed during the preceeding month, less a retainage of 5% of the estimated total of the Work Order. The City will make final payment for partially completed Work Orders, including any retained amounts, upon completion and acceptance of the work and receipt of an Application for Payment at the end of the month in which the work is completed and accepted.

5.0 COMMUNICATIONS

- A. All notices, demands, requests, instructions, approvals and claims must be in writing.
- B. Any such notice shall be deemed to have been given as of the time of delivery, or of actual receipt in the case of telegrams or, in the case of mailing, when it should have been received in due course of post.
- C. For communicating purposes, the office address of the Contractor shall be that stated on the signature page of the contract; that of the City shall be as stated in the Invitation for Bids. Any subsequent change in address of either party shall be communicated to the other in writing.

6.0 PLANS AND SPECIFICATIONS

- A. The City will furnish to the Contractor, without charge, all copies of the specifications reasonably necessary in the performance of the contract work.

7.0 COORDINATION

The Contractor shall:

- A. Supply to the City the name and telephone number of a responsible person who may be contacted during off-hour emergencies during the term of the Contract.
- B. Cooperate at all times with the City and the Project Manager, and ensure the cooperation of his key personnel and that of his subcontractors.

8.0 CONDUCT OF THE WORK

- A. The work must be completed in a continuous uninterrupted operation. The Contractor must use sufficient workforce and adequate equipment to complete all the necessary work requirements within a minimum period of time.
- B. The work shall be conducted between the hours of 8:00 a.m. and 5:00 p.m. on Monday through Friday. No work shall be done on holidays, Saturdays or Sundays except as specifically requested and authorized by the City.
- C. Under no circumstances will the contractor be paid at a premium or overtime rate for any work performed without the express advance authorization of the City.
- D. The Contractor is responsible for the security of partially completed work until the project is finally accepted by the City.

9.0 ALTERATION

- A. The Contractor shall patch, repair and/or replace all existing materials and surfaces remaining exposed after installation of new work which have been affected by alteration or removal of existing work. All patch and repair work shall match existing.

10.0 GENERAL DIRECTIONS

A. Damage to Persons and Property

Any damage to buildings, roads, public roads, bituminous concrete areas, fences, lawn areas, trees, shrubbery, electric or telephone poles, underground utilities, etc., shall be repaired by the Contractor at his own expense. Damaged property shall be returned to its original condition prior to the damages within a reasonable time period, except all utility outages shall be repaired immediately.

B. Protection of Persons and Property

The Contractor shall, at all times, leave an unobstructed way along the roadways and walks, and shall maintain barriers and lights for the protection of all persons and property in all locations where he has materials stored or work going on, and during the entire time such work is going on or material is stored.

C. Shutdown of Services

The Contractor's attention is especially called to the fact that continuous operation of building utilities and services is mandatory. During the period of construction of the new work and/or alterations to the existing work, the progress and sequence of installation shall be carefully planned and approved by the City. If any building is to be left without heat, hot water, city water, electricity, gas, sanitary facilities, or any other services, the Contractor shall provide reasonable written notice to the City before proceeding.

D. Care of Work

All work is to be carefully protected so that no injury will come to it from water, frost, accident, or any other cause and any injury which may come to any of the work shall be repaired immediately by the Contractor at his own expense and without additional cost to the City. This shall also apply to any abutting or adjoining work on premises. The Contractor shall be responsible for any damage and in the event of such damage, the Contractor shall repair the damage immediately at his own cost and without additional cost to the City.

E. Removal of Debris

Debris of any nature shall be completely removed from the site at the end of each days work and disposed of in accordance with all Federal, State and local regulations.

F. The Contractor is responsible for the security of all work until it is accepted by the City.

11.0 TEMPORARY UTILITIES

- A. Prior to execution of the Work, the Contractor shall confer with a representative of the Public Building Department regarding the use of utilities and facilities at the worksite. No City utilities or facilities are to be used by the Contractor in the performance of this Contract without the prior approval of the City.

12.0 SUBMISSION OF PAYROLLS

- A. The Contractor shall, with each invoice submitted during the term of this Contract, submit to the City two (2) legible copies of his payrolls documenting the wages paid to all employees performing on site labor relating to the work of this Contract. These copies shall be prepared on forms supplied by the City.

13.0 DRAWINGS (IF APPLICABLE)

- A. The drawings attached herein and such drawings as may be issued per addendum, shall constitute an integral part of this section and shall serve as the working drawings.
- B. Drawings shall not be scaled. Field verification is directed since actual locations, dimensions and levels are existing.
- C. All items not specifically mentioned in the specifications or noted on the drawings, but which are obviously necessary to make a complete working installation, shall be included.

14.0 MATERIALS

- A. Unless specifically so stated to the contrary the use of a manufacturer's name or style number is not restrictive, and is intended solely as an identification of the type and quality of the materials and services required. In all cases, the words "or approved equal" if not inserted are implied.
- B. An item equal to that named or described in the specifications may upon written approval of the City be furnished by the Contractor. An item shall be considered equal to the item so named or described if (1) it is at least equal in quality, durability, appearance, strength and design; (2) it will perform at least equally the function imposed by the general design for the public work being contracted for or the material being purchased; (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the specifications.
- C. The name and identification of all materials other than the one specifically named shall be submitted to the City in writing for approval, prior to purchase, use or fabrication of such items. Approval shall be at the sole discretion of the City, shall be in writing to be effective, and the decision of the City shall be final. The City may require tests of all materials so submitted to establish quality standards at the Contractor's expense.
- D. For the use of material other than the one specified, the Contractor shall assume the cost of and responsibility for satisfactorily accomplishing all changes that may be required in the work as shown. All directions, specifications and recommendations by manufacturers for the installation, handling, storing, adjustment, and operation of their equipment shall be complied with and responsibility for proper performance shall continue to rest with the Contractor.
- E. The Contractor shall not have any right of appeal from the decision of the City condemning any materials furnished if the Contractor fails to obtain the approval for substitution in accordance with these provisions. If any substitution is more costly, the Contractor shall pay for such costs

15.0 WARRANTY AND INDEMNIFICATION

- A. In addition to other guarantees or warranties required under law or other sections of the specification, the Contractor warrants all materials furnished and labor performed under this Contract to be free from defects or errors in workmanship or installation for a period of one year from the date of Completion of the work, as certified by the Project Manager. The Contractor shall indemnify the Authority for the full cost of any damage to the property that may result by reason of such defects or errors and shall indemnify the Authority from and against any and all claims, demands, losses, costs, expenses, liabilities and damages, including reasonable attorney's fees and expenses, arising out of or on account of this Contract, including but not limited to claims brought against the Authority for alleged infringement of patents based upon any methods of construction or application of materials furnished under the Contract.
- B. The Contractor shall indemnify, hold harmless and defend the City and its departments, officers, employees, servants, and agents from and against all actions, causes of actions, claims, demands, damages, costs, loss of services, expenses and compensation, including attorney's fees and interest arising out of or resulting directly or indirectly from the services rendered pursuant to this Contract, provided that any such action, cause of action, claim, demand, damage, cost, loss of service, expense, compensation (1) in any way grows out of bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, which (2) is caused in whole or in part by any act or omission of the Contractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

END OF SECTION

**CITY OF NEWTON
MINORITY/ WOMEN BUSINESS ENTERPRISE PLAN
DECEMBER 1, 1999
JANUARY 21, 2010 revised**

STATEMENT OF POLICY:

Whereas it is the policy of the government of the United States of America, the Commonwealth of Massachusetts and the City of Newton that no person shall be discriminated against in any manner whatsoever on the grounds of race, religion, color, sex, handicap or national origin; and

Whereas, it is the policy of the government of the United States of America that no person shall, on the grounds of race, color, sex or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program of activity funded entirely or in part by the City, the State or Federal government; and

Whereas, it is the policy of the government of the United States of America to encourage that Minority/Women Business Enterprises shall have the maximum practicable opportunity to participate in Federal and State assisted projects; and all City funded contracts; and

Whereas, it is the policy of the City of Newton to encourage that minority/women business enterprises shall have the maximum practicable opportunity to participate in all City funded contracts; and

Whereas, the City of Newton, as a recipient of Federal and State funds subscribes to the above policies and will fully comply With Federal, State and local laws and directives governing non-discrimination, equal opportunity and affirmative action in all municipal activities; and

Whereas, to further enunciate the equal opportunity policy of the City of Newton's Minority/Women Business Program, the following responsibilities are specified

This MINORITY/ WOMEN Business Enterprise Plan sets forth the administrative standards for the further implementation of the City of Newton's policy of the utilization of minority contractors and subcontractors.

The City of Newton strongly affirms that it will not discriminate in any contractual procedures against any persons because of race, color, religion, age, disability, sex or national origin. This policy shall be administered with a positive supportive attitude.

It is the responsibility of the City of Newton to take affirmative steps to implement this policy to insure equality of opportunity in conducting the Program including notifying those persons and businesses doing business with the City, that contracts for goods, services and construction, shall be made Without reference or regard to race, color, sex, age, handicap, religion or national origin.

Setti D. Warren Mayor

CITY OF NEWTON
MINORITY/ WOMEN BUSINESS ENTERPRISE PLAN
JANUARY 21, 2010

I. DEFINITIONS:

A. **Minority Person**- the term includes a person who is of Black Hispanic, Asian, American Indian or Cape Verdean origin.

B. **Minority Business Enterprise (MBE)** – the term shall mean a business a) that is certified by SOMWBA; or b) I provides evidence satisfactory to the City's Affirmative Action Officer that it is a business owned or controlled by one or more of the following:

- an individual who is a minority person,
- a partnership or joint venture controlled by minority persons in which at least 51 % of the ownership interest is held by minority persons or,
- a corporation or other entity controlled by minority persons and in which at least 51 % of the stock is owned by one or more minority persons.

C. **Contract Compliance Officer** - the Chief Procurement Officer or his/her designee responsible for the implementation of Newton's Minority/Women Enterprise Plan ("MWBE Plan") and activities.

D. **MCAD** - Massachusetts Commission Against Discrimination.

E. **SOMWBA** -- State Office of Minority/Women Business Assistance,

F. **City** - The City of Newton.

G. **Women Business Enterprise (WBE)** - the term shall mean a business a) that is certified by SOMWBA; or b) provides evidence satisfactory to the City's Affirmative Action Officer that it is a business owned or controlled by one or more of the following:

- an individual who is a woman.
- a partnership or joint venture controlled by women in which at least 51% of the ownership interest is held by women, or
- a corporation or other entity controlled by women and in which at least 51% of the stock is owned by one or more women.

H. **MWBE** — Minority or Women Business Enterprise

II. GOALS:

Newton's Minority/Women Enterprise Plan ("MWBE Plan") shall be guided by the goals presented below to promote minority/women opportunities within the City.

These goals comprise the framework for those activities to be implemented as part of the MWBE Plan:

To take affirmative action in expanding opportunities for minority and women owned firms in obtaining contracts within the City of Newton.

To assure that all contractors, regardless of race color, religion, creed, national origin, sex, age, ancestry or handicap, shall have equal opportunity to City contracting activities.

To award, of the total annual City contract dollars expended, 10 percent to MBE and 5 percent to WBE for construction; for goods and services, 5 percent WBE and 5 percent MBE.

III. SOLICITATION ACTIVITIES:

To notify MWBEs of upcoming contracts for construction, professional services and supplies, funded in whole or in part with Federal, State, and City funds, the following activities will be undertaken. In addition on a regular basis, the City of Newton will distribute to its listing of MWBEs and SOMWBA, a summary of upcoming contract opportunities which are subject to the City's MWBE Plan.

A. Construction Contracts

All construction contracts with an estimated value over \$50,000 will be formally advertised within local, regional, minority and special interest publications at least 14 days prior to the bid opening date.

For all such construction contracts a "Notice of Solicitation" of a project going out to bid will be distributed to appropriate SOMWBA or City certified firms at least 14 days prior to the bid opening date.

B. Contracts for Professional Services

The City of Newton will send notification of its advertised Request for Proposals to appropriate SOMWBA or City certified firms Responding MWBE firms will be considered for contract award within the bounds of generally accepted management practice or with the applicable procurement law relating to securing the lowest cost and best services available.

C. Procurement of Supplies

The City of Newton will (where feasible) utilize MWBEs for the procurement of supplies in accordance with City purchasing procedures. These efforts will be documented and reported to MCAD, and the Mayor's office on a quarterly basis.

IV. CONSTRUCTION ACTIVITIES:

A. Goals

The City of Newton bid documents and contracts with an estimated value over \$50,000 will contain the City's goal of 10% for MBE and 5% for WBE utilization for subcontracts.

B. Pre-Bid Conference

To affirmatively further the opportunities available to prospective bidders, the City will hold a pre-bid conference 5-7 days prior to the bid opening date for all City construction contracts and subcontracts with an estimated value over \$50,000.

The pre-bid conference will provide an opportunity for contractors to: review and clarify the technical requirements of the projects, review the City's MWBE Plan; and review Equal Opportunity requirements. The City will advertise this conference and extend invitations to interested contractors as part of the notice of solicitation.

C. Bid Submission

All bids for City of Newton contracts with an estimated value over \$50,000 shall include a certification of intent to be completed by the bidder stating his/her intent to comply with the City's MWBE Plan. Failure to include this certification shall be an informality which may be waived if such certification is received prior to the award of the contract.

D. Contract Execution

Upon notification of award of the contract, the bidder shall provide a written plan detailing how it will comply with the MWBE Plan.

E. Monitoring

Throughout the duration of the contract, the City of Newton through its Contract Compliance Officer, will monitor the progress and activities of all contractors and subcontractors as they attempt to comply with the MWBE Plan.

F. Enforcement

In the case of clear neglect to make a good faith effort to comply with this MWBE Plan, the City of Newton reserves the right to designate contractor, after a hearing, as ineligible for future City bid awards.

V. CONTRACT COMPLIANCE OFFICER/DUTIES AND RESPONSIBILITIES:

The Contract Compliance Officer, as liaison between minority firms and the City of Newton will have the overall responsibility for the implementation of Newton's MWBE Plan. This responsibility includes the development, management, dissemination of information; the provision of technical assistance to minority firms including clarification of procedures to be implemented; maintenance of relevant documentation; completion of reporting requirements; and performance of monitoring and evaluation activities; and maintenance and updating of listings of minority/women business.

The Contract Compliance Officer has oversight of all City procurements for construction, professional services and supplies and shall coordinate the implementation of the MWBE Plan with other City departments.

THE CITY OF NEWTON, MASSACHUSETTS
SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY
ANTI-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM

- I. The requirements hereinafter set forth apply to construction contracts which involve an expenditure by the City of \$50,000 or more.
- II. For purposes of this contract "minority" refers to Asian Americans, Black, Hispanics American Indians and Cape Verdeans. The City refers to the- City of Newton
- III. During the performance of this contract the Contractor and all of (his) Subcontractors (hereinafter collectively referred to as the Contractor) , for himself, his assignees, and successors in interest, agree as follows:

In connection with the performance of work under this contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age or sex. The aforesaid provision shall include, but not be limited to, the following: layoff; termination; rates of pay or other forms of compensation; conditions or privileges of employment; and the selection of apprenticeship. The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the City setting forth the provisions of the Fair Employment Practices Law of the Commonwealth (MGL Chapter 151 B) . (See Attachment A)

2. In connection with the performance of work under this contract, the Contractor shall undertake in good faith, affirmative action measures designed to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national origin, age or sex, and to eliminate and remedy any effects of such discrimination -in the past. Such affirmative action shall, entail positive and aggressive measures to ensure equal employment: opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, Layoff or termination, rate of compensation, and in-service or apprenticeship training programs. This affirmative action shall, include all action required to guarantee equal employment opportunity for all persons, regardless of race, color, religious creed, national origin, age or sex. A purpose of- this provision is to ensure to the fullest extent possible an adequate supply of skilled tradesmen for this and future City public construction projects
1. As part of this obligation of remedial action under the foregoing section, the contractor shall maintain on this project a not less than 5 percent ratio of minority employee man hours to total man hours in each job category, including, but not limited to, bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers, and those "classes of work" enumerated in Section 44C of Chapter 149 of the Massachusetts General Laws.
2. In the hiring of minority journeymen, apprentices, trainees and advanced trainees, the Contractor shall rely on referrals, from the Contractor's affirmative action program approved by the City, traditional referral methods utilized by the construction industry, and referrals from agencies, not more than three in number at any one time, designated by the Liaison Committee or the City.

1. At the discretion of the City, there may be established for the life of this contract a body to be known as the Liaison Committee. The Liaison Committee shall be composed of the Compliance Officer and one representative each from the Departments administering this project, hereinafter called the administering Departments, and such other representatives as may be designated by the City.
2. The Contractor (or, his/her agent, if any, designated by him/her as the onsite equal employment opportunity officer) shall recognize the Liaison Committee as the affirmative action body, and shall establish a continuing working relationship with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.
3. The Contractor shall prepare manning tables on a quarterly basis.* These shall be broken down into projections, by week, for workers required in each trade. Copies shall be furnished one week in advance of the initiation of work and quarterly thereafter to the City and to the Liaison Committee.
4. Records of employment referral orders, prepared by the Contractor, shall be made available to the City and to the Liaison Committee on request.
5. The contractor shall prepare weekly reports in a form approved by the City of hours worked in each trade by each employee, identified as minority or non-minority. Copies of these reports shall be provided at the end of each week to the City and to the Liaison Committee.

* If job is less than three months, prepare for length of job.

- VI. If the Contractor shall use any sub contractor on any work performed under this contract, he/she shall take affirmative action to negotiate with qualified minority subcontractors. This affirmative action shall cover both pre-bid and post-bid periods. It shall include notification to the State Office of: *Minority Business Assistance* or As designee, while bids are in preparation, of all products, work or services for which the Contractor intends to negotiate bids.
- VII. In the employment of journeyman, apprentices, trainees, and advanced trainees, the Contractor shall give preference to citizens of the Commonwealth who have served in the armed forces of the United States in time of war and have been honorably discharged there from or released from active duty therein, and who are qualified to perform the work to which the employment relates, and, secondly to citizens of the Commonwealth generally, and, if such cannot be obtained in sufficient numbers, then to citizens of the United States
- VIII. A designee of the City and a designee of the Liaison Committee shall each have the right of access to the Construction site,
- IX. **Compliance with Requirements**
The Contractor shall comply with the provisions of Chapter 151 B of the Massachusetts General Laws, which are herein incorporated by reference and made as amended by Executive Order 227, and of Chapter 151B as amended, of the Massachusetts General Laws, both of which are herein incorporated by reference and made a part of this contract.
- X. **Non-Discrimination**
The Contractor, in the performance of all work after award, and prior to completion of the contract work, will not discriminate on the grounds of race, color, religious creed,

national origin, age or sex in employment practices, in the selection or retention of sub-contractors, or in the procurement of materials and rentals of equipment.

XI. **Solicitations for sub-Contracts and for the Procurement of Materials and Equipment**

In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or equipment, each potential subcontractor or supplier shall be notified in writing by the Contractor of the Contractor's obligations under his contract relative to non-discrimination and affirmative action.

XII. **Bidders Certification Requirement**

1. The following certification statement will be inserted in the bid document just above the bidder's signature.

"The bidder hereby certifies he shall comply with the minority manpower ratio and specific action steps contained in the City of Newton, Massachusetts Supplemental Equal Employment-- Opportunity Anti-Discrimination and Affirmative Action Program. The Contractor receiving the award of the contract shall be required to obtain from each of its subcontractors and submit to the contracting or, administering agency prior to the performance of any work under said contract a certification by said subcontractor, regardless of tier, that it will comply with the minority manpower ratio and specific affirmative action steps contained in the City of Newton Massachusetts Supplemental Equal Employment Opportunity Anti -Discrimination and Affirmative Action Program.

XIII. **Contractor's Certification**

A Contractor's certification form must be signed by all successful low bidders prior to award by the City. A Contractor shall not be eligible for award of a contract unless the contractor has executed and submitted the Contractor's Certification, which shall be deemed a part of the resulting contract. (See Attachment B)

XIV. **Subcontractor's Certification**

Prior to the award of any subcontract, regardless of tier, the prospective subcontractor must execute and submit to the Prime Contractor a subcontractor's certification setting forth the subcontractor's compliance with this program, which shall be deemed a part of the resulting subcontract. (See Attachment C)

XV. **Compliance - Information, Reports and Sanctions**

1. The Contractor will provide all information and reports required by the administering department or, the City on instruction issued by either of them and will permit access to its facilities and any books, records, accounts and other sources of information which

may be determined by the City to affect the employment of personnel. This provision shall apply only to information pertinent to the City's supplementary affirmative action contract requirements. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the administering department or the City as appropriate and shall set forth what efforts he/she has made to obtain the information.

2. Whenever the administering department, the City, or the Liaison Committee believes the General Contractor or any Subcontractor may not-, be operating in compliance with the terms of this Section, the City directly, or through its designated agent, shall conduct an appropriate investigation, and may confer with the parties, to determine if such Contractor is operating in compliance with the terms of this Section. If the City or its agent finds the General Contractor or any Subcontractor not in compliance, it shall make a preliminary report on non-compliance, and notify such Contractor in writing of such steps as will in the judgment of the City or its agent bring such Contractor into compliance. In the event, that such Contractor fails or refuses to fully perform such steps, the City shall make a final report of non-compliance, and recommend to the administering department the imposition of one or more of the sanctions listed below. If, however, the City believes the General Contractor or any Subcontractor has taken or is taking every possible measure to achieve compliance, it shall not make a final report of non-compliance, within fourteen days at the receipt of the recommendations of the City, the administering department shall move to impose one or more of the following sanctions, as it may deem appropriate to attain full and effective enforcement:

- (a) The recovery by the administering department from the General Contractor of 1/100 of!! of the contract award price or \$1000 whichever sum is greater, in the nature of liquidated damages or
if a Subcontractor is in non-compliance, the recovery by the administering department from the General Contractor, to be assessed by the General Contractor as a back charge against the Subcontractor, of 1/10 of 1% of the sub-contract price, or \$400 whichever sum is greater, in the nature of liquidated damages, for each week that such party fails or refuses to comply
- (b) The suspension of *any* payment of part thereof due under the contract until such time as the General Contractor or any Subcontractor is able to demonstrate his compliance with the terms of the contract;
- (c) The termination, or cancellation, of the contract, in whole or in part, unless the General Contractor or any Subcontractor is able to demonstrate within a specified time his/her compliance
with the terms of the City's affirmative action construction contract requirements; OR,
- (d) The denial to the General Contractor or any Subcontractor of the right to participate in any future contracts awarded by the administering department for a
- (e) Period of up to three years.

3. If at any time after the imposition of one or more of the above sanctions (unless the contract has been terminated), a Contractor is able to demonstrate that he/she is in compliance with this section, he/she may request the City to suspend the sanctions conditionally pending a final determination by the City as to whether the Contractor is in

compliance. Upon final determination of the City, the administering department, based upon the recommendation of the City, shall either lift the sanctions or continue them.

4. Sanctions enumerated under Section XV shall not be imposed by the City except after the General Contractor or Subcontractor has had an opportunity for full and fair hearing with City. The non-compliance investigation shall be initiated without prior notice to the contractor. Any sanctions to be imposed shall be, set forth fully and completely in writing, and may then be appealed to the City in writing by the Contractor.

XIV. **Severability**

The provisions of this section are severable, and if any of these provisions shall be held unconstitutional by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions.

FAIR EMPLOYMENT LAW

The Fair Employment Law declares that it is illegal to discriminate on the basis of race, color, religious creed, national origin, sex, sexual orientation, age, ancestry or disability

IT IS UNLAWFUL:

- to print or circulate any advertisement or use any application form which directly or indirectly specifies any limitation on the basis of race, color, religious creed, national origin, sex, sexual orientation, age, ancestry or disability.
- to discharge or refuse to hire any individual on the basis of their race, color, religious creed, national origin, sex, sexual orientation, age, ancestry, or disability.
- to discriminate against any individual in matters relating to compensation, terms, conditions, or privileges of employment because of their race, color, religious creed, national origin, sex, sexual orientation, age, ancestry or disability.
- to require a woman to leave her job at some arbitrary stage in her pregnancy or to refuse to let her return to work until a specified time set by the employer.
- to grant a female employee at least eight weeks leave for purposes of childbirth or to treat her absence differently than any other absence due to disability.
- to require an employee to remain at work during any day or part thereof that s/he observes as a religious holiday provided that the employee gives a ten-day notice and the absence does not cause undue hardship to the employer.
- to discharge or refuse to hire any person because of their failure to furnish information concerning admission to a center for the treatment of mentally ill persons.
- to discriminate against a job applicant for failure to furnish information, written or oral, concerning:- A) an arrest, detention or disposition regarding a violation of law in which no conviction resulted; B) a first conviction for any of the following misdemeanors: driving under the influence, simple assault, speeding, minor traffic violations, disturbance of the peace; or C) conviction for a misdemeanor where the date of the conviction or end of period of incarceration, if any, occurred more than five years prior to the employment application, and the applicant has not been convicted of any offense within the five years immediately before the date of application.

RETALIATION

It is illegal to retaliate against any person because s/he has opposed any practices forbidden under this Chapter or because s/he has filed a complaint, testified, or assisted in any proceeding before the Commission. It is also illegal to aid, abet, incite, compel or coerce the doings of any of the acts forbidden under this Chapter or to attempt to do so.

SEXUAL HARASSMENT

151B:1,18 The term "sexual harassment" shall mean sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when (a) submission to or rejection of such advances, requests or conduct is made either explicitly or implicitly a term or condition of employment, or as a basis for employment decisions; (b) such advances, requests or conduct have the purpose or effect of unreasonably interfering with an individual's work performance by creating an intimidating, hostile, humiliating or sexually offensive work environment.

COMPLAINTS

All complaints must be filed in writing. Information on the filing of complaints can be obtained by contacting the MASSACHUSETTS COMMISSION AGAINST DISCRIMINATION at the following locations:

Boston office:
One Ashburton Place
Room 601
Boston, MA 02108
(617) 727-3990

Springfield office:
436 Dwight Street
Suite 315
Springfield, MA 01103
(413) 739-2145

Attachment B

CITY OF NEWTON

Contractors Certification

A Contractor will not be eligible for award of a contract, unless such contractor has submitted the following certification, which is deemed a part of the resulting contract.

CONTRACTOR'S CERTIFICATION

Contractor's Name Certifies that:

1. it tends to use the following listed construction trades in the work under the contract
_____ and
2. will comply with the minority manpower ration and specific affirmative action steps contained herein; and
3. will obtain from each of its subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this contract the subcontractor certification required by these bid conditions

(Signature of authorized representative of Contractor)

Any contract for the provision of goods or services to the City of Newton or any of its departments is subject to the ordinance creating the Human Rights Commission, as it may be amended from Time to Time. Any complaints within the purview shall be forwarded immediately to the contracting agency, and a copy shall be sent to the Human Rights Commission; any complaints received by the contracting agency shall be forwarded to the contractor, and a copy shall be sent to the Human Rights Commission.

Attachment C

CITY OF NEWTON

Subcontractors Certification

Prior to the award of any subcontract, regardless of tier, the prospective subcontractor must execute and submit to the Prime Contractor the following certification, which will be deemed a part of the resulting subcontractor.

SUBCONTRACTOR'S CERTIFICATION

Contractor's Name Certifies that:

1. it tends to use the following listed construction trades in the work under the contract
_____ and
2. will comply with the minority manpower ration and specific affirmative action steps contained herein; and
3. will obtain from each of its subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this contract the subcontractor certification required by these bid conditions

(Signature of authorized representative of Contractor)

In order to ensure that the said subcontractor's certification becomes part of all subcontracts under the prime contract, no subcontract shall be executed until an authorizee representative of the Administrative Agency administering this project has determined in writing, that the said certification has been incorporated in such subcontract, regardless of tier, Any subcontract executed without such written approval shall be void.

Any contract for the provision of goods or services to the City of Newton or any of its departments is subject to the ordinance creating the Human Rights Commission, as it may be amended from Time to Time. Any complaints within the purview shall be forwarded immediately to the contracting agency, and a copy shall be sent to the Human Rights Commission; any complaints received by the contracting agency shall be forwarded to the contractor, and a copy shall be sent to the Human Rights Commission.

CITY OF NEWTON

WAGE RATE REQUIREMENTS

1. GENERAL

- A.** This section summarizes the requirements for the payment of wages to laborers and mechanics employed under the Contract.
- B.** Other duties and requirements of law which may not be specified in this section apply and are inherently part of the Contract.

2. WAGE RATES

- A.** The rate per hour to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the Work shall not be less than the rate of wages in the attached "Minimum Wage Rates" as determined by the Commissioner of Labor and Industries. The schedule of prevailing wage rates will be updated annually for all public construction projects lasting longer than one (1) year. The contractor shall pay the prevailing wage rate set out in the applicable prevailing wage rate schedule. Increases in prevailing wage rates shall not be the basis for a change order.
- B.** Keep posted on the site a legible copy of said schedule. Keep on file the wage rates and classifications of labor employed on this Work in order that they may be available for inspection by the Owner, Administrator, or the Architect.
- C.** Apprentices employed pursuant to this determination of wage rates must be registered and approved by the State Apprenticeship Council wherever rates for journeymen or apprentices are not listed.
- D.** Pay reserve police officers employed on the Work the prevailing rate of wages paid to regular police officers as required by M.G.L. c 149, Sec. 34B, as amended. Such police officers shall be covered by Workmen's Compensation Insurance and Employers Liability Insurance by the Contractor.
- E.** The Contractor and all subcontractors shall, on a weekly basis throughout the term of the contract, provide to the City of Newton certified payroll affidavits verifying compliance with M.G.L. c.149, Sec. 27, 27A and 27B.
- F.** The Contractor and all subcontractors shall provide a Statement of Compliance within 15 days of the completion of its portion of the work. This statement shall be submitted to the Owner on the form found elsewhere in this section.
- G.** The Contractor shall maintain accurate and complete records, including payroll records, during the Contract term and for three years thereafter. Filings made by the Contractor pursuant to Clauses 47, 48 and 49 of the General Conditions shall be deemed to constitute compliance with State filing requirements under the Massachusetts Prevailing Wage Law.

END OF SECTION

The Prevailing Wage Rate Schedule
will be provided as a separate pdf document
when project is Released.

Number of Pages 61

The Massachusetts Prevailing Wage Law

M.G.L. ch. 149, §§ 26 – 27

NOTICE TO AWARDING AUTHORITIES

- 'The enclosed wage schedule applies only to the specific project listed at the top and will be updated for any public construction project lasting longer than one (1) year.
- 'You should request an updated wage schedule from the Division of Occupational Safety if you have not opened bids or selected a contractor within 90 days of the date of issuance of the enclosed wage schedule.
- 'The wage schedule shall be incorporated in any advertisement or call for bids for the project for which it has been issued.
- 'Once a contractor has been selected by the awarding authority, the wage schedule shall be made a part of the contract for that project.

NOTICE TO CONTRACTORS

- The enclosed wage schedule, and any updated schedule, must be posted in a conspicuous place at the work site during the life of the project.
- The wages listed on the enclosed wage schedule must be paid to employees on public works projects regardless of whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
- The enclosed wage schedule applies to all phases of the project including the final clean-up. Contractors whose only role is to perform final clean-up must pay their employees according to this wage schedule.
- All apprentices must be registered with the Massachusetts Division of Apprentice Training in order to be paid at the reduced apprentice rates. If a worker is not registered with the Division of Apprentice Training, they must be paid the “total rate” listed on the wage schedule regardless of experience or skill level. For further information, please call (617) 727-3486 or write to the Division of Apprentice Training, 399 Washington Street, 4th Floor, Boston, MA 02108

WEEKLY PAYROLL RECORDS REPORT

& STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided. A Payroll Form has been printed on the reverse of this page and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

In addition, every contractor and subcontractor is required to submit a copy of their weekly payroll records to the awarding authority. This is required to be done on a weekly basis. Once collected, the awarding authority is also required to preserve those records for three years.

In addition, each such contractor, subcontractor or public body shall furnish to the Department of Labor & Workforce Development/Division of Occupational Safety within fifteen days after completion of its portion of the work a statement, executed by the contractor, subcontractor or public body who supervises the payment of wages, in the following form:

STATEMENT OF COMPLIANCE

_____, 20_____

I, _____,

(Name of signatory party) (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by

_____ on the _____

(Contractor, subcontractor or public body) (Building or project)

and that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty nine of the General Laws.

Signature _____

Title _____

DIVISION OF OCCUPATIONAL SAFETY, 399 WASHINGTON STREET, 5th FL., BOSTON, MA. 02108

END OF SECTION

SECTION 01 10 00

SCOPE OF THE WORK

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site

1.02 LOCATION OF WORK

- A. The work of this Contract shall be performed at the Lower Falls Community Center, Newton Massachusetts.

1.03 GENERAL SCOPE OF WORK

- A. The work to be done consists:
 - 1. Removal and replacement of the existing metal windows with fiberglass windows
 - 2. Construction of stud knee walls with EIFS on the exterior, GWB on the interior
 - 3. Excavation and repairs to the existing foundation and installation of perimeter insulation and parging
 - 4. Replacement of sections of the existing concrete walkways
 - 5. Insulated interior wall construction over existing brick walls.
 - 6. Replace existing door frames and reuse existing FRP doors and hardware
 - 7. During ALL phases of work, from demolition through the completion of finishes, negative air pressure shall be maintained within the work areas until the spaces are turned over to the Owner for use and occupancy.

ENVELOPE IMPROVEMENTS LOWER FALLS COMMUNITY CENTER NEWTON, MASSACHUSETTS

- B. The General Contractor shall furnish and do everything, except as otherwise provided by specific notations herein or on the drawings, necessary to complete the work in accordance with the Plans and Project Manual. He shall furnish all plant, labor, materials, supplies, tools, water, machinery, implements, light, power, transportation, and other facilities required, and do all work necessary for the complete execution and completion of the Contract, except that work or materials specifically stated to be done or furnished by others.
- C. All work and materials furnished and installed shall be of the best quality and workmanship, and to the satisfaction of the Architect. There shall be no defect in the work or the operation thereof due to inferior materials or the workman like placing of any part. The work under this contract shall be performed at such times as may be necessary to facilitate the orderly progress of the work. It is the intention of these Specifications and Plans to cover all work necessary and incidental to the completion of this project, including all trades, as shown on the drawings or specified.

- D. Contractor shall do all necessary cutting and patching of structural and finish work as necessary to provide the finished results shown on the Contract Drawings and as herein specified.

1.04 LIST OF DRAWINGS dated December 1, 2011

LOWER FALLS COMMUNITY CENTER

<u>Plan No.</u>	<u>Description</u>
GENERAL	
T1.1	TITLE SHEET
DEMOLITION	
D1	DEMOLITION – FLOOR PLAN
D2	DEMOLITION – EXTERIOR ELEVATIONS
ARCHITECTURAL	
A1	NEW WORK – FLOOR PLAN
A2	NEW WORK – EXTERIOR ELEVATIONS
A3	ENLARGED WINDOW ELEVATIONS AND DETAILS
A4	WALL SECTIONS
A5	DETAILS

END OF SECTION

CONSTRUCTION SCHEDULING AND PHASING

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site

1.02 DESCRIPTION OF WORK

- A. This Section specifies the construction phasing and scheduling of the work. The building will be occupied for the duration of the project. The contractor will be limited to work in one classroom at a time. Work in the gymnasium and office area can be done concurrently with the classroom work.
- B. This Section also specifies the requirements and limitations that will be imposed during the execution of the work. Before any construction commences, the contractor must submit a schedule that identifies weekly activities for the duration of the project for approval by the Architect and Owner.

1.03 SUBMITTALS

- A. The Contractor shall submit to the Architect for approval, a Construction Schedule in accordance with the requirements and limitations hereinafter specified.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

3.01 COORDINATION

- A. Upon receipt of bids and execution of the contract the contractor shall submit all materials and shop drawings for review and approval. The work of removal, modifications and/or replacement of materials and equipment shall not proceed until all new items are on site.
- B. During the initial stage of the project, a mandatory coordination meeting will be scheduled to discuss the awareness for all subcontractors to provide a continuous air barrier.
- C. The facility will continue to be occupied for daycare purposes during the time that the work under this contract is being performed. Therefore, the quantity of space that will be available to the contractor for window installation will be limited during the year while it is in session. During the year, the contract work shall be completed in the limited spaces during second shift operations to avoid work while the building is occupied.
- D. During the course of the work the Contractor shall, through a series of weekly meetings, continually appraise the Architect and the Facility Representative on the progress of the work and the scheduling of work yet to be done.

- E. The Contractor shall coordinate his work with the Community Center Administration in order that disruption to traffic flows and schedules are held to a minimum.
- F. The work of installing new window units shall proceed as per the limitations stated in 1.02.A. Remove and replace window shades, blinds or drapes as the work progresses.
- G. Work of removal of existing construction shall not start until all components of new window units are on the site and ready for installation.
- H. Immediately after existing construction has been removed from one opening, the new window installation shall proceed to completion before existing construction is removed from the next opening. See 1.02.A for further description of phasing requirements.

3.02 LIMITATIONS

- A. Sewer, water, gas and electric services to the building shall not be disconnected or disrupted during the course of performing the work under this Contract except during unoccupied hours when approved by the Owner.
- B. Contractor's employee parking will be limited to areas designated on the site.
- C. Contractor's storage area shall be confined to the areas designated on the site.
- D. The Contractor shall consult with the Chief of the City of Newton Fire Department on details or access routes for fire/emergency vehicles and appropriate signs (warning and information).
- E. The Contractor shall coordinate his work with the Building Administration to prevent pedestrian or vehicle traffic problems on the properties. Demolition should not present problems for fire or ambulance access to the building entrances.
- F. Drilling, jack hammering and like noisy operations shall not be performed directly under or adjacent to occupied spaces. The contractor shall consult with the Architect and Owner and ascertain when spaces will be unoccupied at which time such operations may be performed.
- G. Temporary entrances and fencing required to provide safe legal exits and entrance to the building shall be constructed as necessary and shall be completed and inspected and approved by the Building Commissioner.
- H. Exits shall be properly lighted and maintained clear of construction at all times.
- I. No construction materials shall be stored in such a way as to interfere with entrance and exits to the building and access to walks and play fields.
- I. The work scheduled under this contract shall be substantially complete on or before May 31, 2012.

3.03 SCHEDULE OF WORK

- A. Contractor shall meet with the architect and building administration to establish space availability for the work under this contract. The contractor shall then submit to the Architect for approval a construction schedule. The schedule shall indicate the tasks to be performed with a time schedule indicating the start and completion date of each task.

END OF SECTION

SECTION 01 70 00

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon
- E. Except for unforeseeable conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site

1.02 FINAL CLEANING

- A. Unless otherwise specified under the various sections of the specifications, the general contractor shall perform final cleaning operations as herein specified prior to final inspection.
- B. Maintain project site free from accumulations of waste, debris, and rubbish, caused by operations. At completion of work, remove water, materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight-exposed surfaces; leave project clean and ready for occupancy.
- C. Cleaning shall include all surfaces, interior and exterior in which the general contractor has performed work and has used as access to areas where work was performed whether existing or new.
- D. Refer to sections of the specifications for cleaning of specific products or work.
- E. Use only those materials which will not create hazards to health or property and which will not damage surfaces.
- F. Use only those cleaning materials and methods that are recommended by the manufacturer or surface material to be cleaned.
- G. Employ experienced workmen, or professional cleaners, for final cleaning operations.
- H. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.

1.03 RECORD DRAWINGS

- A. Record drawings shall consist of **all** the contract drawings.
- B. The general contractor shall be required to maintain one set of record drawings, as the work relates to their sections of the specifications at the site.
- C. The record drawings shall be stored and maintained in the general contractor's office apart from other documents used for construction. The record drawings shall be maintained in a clean, dry and legible condition and shall not be used for construction purposes.

- D. Record drawings, as submitted by the general contractor, shall be verified in the field by the Architect or his consultants. Verification by the Architect shall occur during the construction process and prior to the related work being completed and covered up.
- E. The record drawing shall be available at all time for inspection by the Architects. All deficiencies noted shall be promptly corrected.
- F. The following information shall be indicated on the record drawings:
 - 1. Record all changes, including change orders, in the location, size, number and type both horizontally and vertically of all elements of the project which deviate from those indicated on all the contract drawings.
 - 2. The tolerance for the actual location of utilities and appurtenances within the building to be marked on the record drawings shall be plus or minus two (2) inches.
 - 3. The location of all underground utilities and appurtenances referenced to permanent surface improvements, both horizontally and vertically at ten (10) feet intervals and at all changes of direction.
 - 4. The location of all internal utilities and appurtenances, concealed by finish materials, including but, not limited to valves, coils, dampers, vents cleanouts, strainers, pipes, junction boxes, turning vanes, variable and constant volume boxes, ducts, traps and maintenance devices. The location of these internal utilities, appurtenances and devices shall be shown by offsets to the column grid lines on the drawings.
 - 5. Each of the utilities and appurtenances shall be referenced by showing a tag number, area served and function on the record drawings.
- G. At the end of each month and before payment for materials installed, the general contractor, his subcontractors, and the Architect shall review record drawings for purpose of payment. IF THE CHANGES IN LOCATION OF ALL INSTALLED ELEMENTS ARE NOT SHOWN ON THE RECORD DRAWINGS AND VERIFIED IN THE FIELD, THEN THE MATERIAL SHALL NOT BE CONSIDERED AS INSTALLED AND PAYMENT WILL BE WITHHELD.
- H. At the completion of the contract, each subcontractor shall submit to the general contractor a complete set of his respective record drawings indicating all changes. After checking the above drawings, the general contractor shall certify in writing on the title sheet of the drawings that they are complete and correct and shall submit the record drawings to the Architect. The contractor shall submit an electronic version of the Record Drawings along with a hard copy.

1.04 CLOSEOUT REQUIREMENTS AND SUBMITTALS

- A. Final Inspection:
 - 1. The general contractor shall submit written certification that:
 - a) Project has been inspected for compliance with contract documents and has satisfied the Building Department and local Fire Department.
 - b) Equipment and systems have been tested in the presence of Architect and are operational and satisfactory.
 - c) Project is completed, and ready for final inspection.
 - 2. Building Department Use and Occupancy Permit:
 - a) Arrange for a final inspection and secure the signed Certificate of Inspection for Use and Occupancy from the Building Department.

1.05 GUARANTEES AND WARRANTIES

- A. Submit to the Architect all extended guarantees and warranties that have been specified in various, individual sections of the specifications.

END OF SECTION

SECTION 02 41 00

DEMOLITION

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon.
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site.

1.02 SCOPE OF WORK

- A. This Section specifies the furnishing of all materials, labor, tools and equipment, and performing all operations necessary to complete all demolition work as shown on the Drawings and herein specified.
- B. The work shall include, but is not limited to:
 - 1. Complete removal and disposal of existing metal windows, glass, trim, caulking, glazing compounds and miscellaneous related items required for the completion of the work of this Contract.
 - 2. Removal of doors, frames and hardware where indicated on the plans. Doors shall be safely stored for reinstallation.
 - 3. The caulking and glazing have tested positive for asbestos. As such the work also includes the removal and disposal of asbestos containing caulking and glazing compounds.
 - 4. Selective demolition of soffits at roof overhangs.
 - 5. Demolition of portion of ceilings as required where shown in plans.
 - 6. Provide and maintain negative air pressure within the spaces where demolition is taking place.

1.03 PERMITS

- A. Contractor shall obtain and pay for all permits required for the execution for the work under this Contract.

1.04 JOB SITE CONDITIONS

- A. The contractor shall coordinate his work with the Community Center operations, vehicle and pedestrian access to and from the site, etc. to prevent pedestrian or vehicle traffic problems on the property. Demolition shall not present problems for fire or ambulance access to building.

1.05 REGULATIONS

- A. Removal of asbestos containing window caulking/glazing shall be in accordance with all applicable regulations including Part II OSHA, 29 CFR parts 1910, et al, dated August 10, 1994.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

3.01 PROTECTION

- A. The demolition work shall be carried on in a manner that will insure adjacent property, whether title to such property be with the City of Newton, Massachusetts and the Lower Falls Community Center or some other owner, and whether the property be occupied or not, from any damage or injuries which might occur from falling debris or other cause and so as not to interfere with the use of the building or the free and safe passage to and from the same.
- B. Provide, erect and maintain all fences, planking, bracing, shoring, lights, barricades, partitions, warning signs and guards as necessary for the protection of the existing buildings, the contents of the buildings, Community Center users, staff and the general public.
- C. The Contractor shall provide the proper protection for all existing work, furnishings, and fixtures likely to be damaged where work is to be done and where openings are made in existing exterior walls. Openings in existing exterior walls shall be provided with watertight protection to protect against entry of inclement weather and partitions that will prevent entry of persons into the building at the end of each day's work.
- A. Provide a fire watch and fire protection materials and equipment at all times in the areas where "hot" work such as cutting and burning is taking place. Consult with the local Fire Department for fire watch requirements.
- B. Remove and dispose of all window treatments such as shades, blinds and drapes as per the phasing mentioned in section 01 31 00 Construction Scheduling & Phasing, 1.02.A.

3.02 ASBESTOS ABATEMENT

- A. Asbestos abatement shall at a minimum conform to the following work practices.
 - 1. Refer to Phasing requirements described in Section 01 31 00 Construction Scheduling & Phasing, 1.02.A
 - 2. Contractor shall post all OSHA required signage.
 - 3. Persons not involved in the removal shall be excluded from the work area.
 - 4. Workers shall wear protective clothing and half-mask, dual-cartridge, HEPA-filtered respirator, at a minimum.
 - 5. The work area shall be isolated as required by regulations and to the satisfaction of the Industrial Hygienist. All area where window caulking, glazing compounds are to be removed shall be sealed off by the use of polyethylene (2) sheeting on all interior openings.
 - 6. A minimum of a two chambered worker decontamination enclosure system shall be provided on site in accordance with OSHA 29 CFR 1926.1101, Appendix G. Procedures for the utilization of this system shall be established which will prevent contamination of areas outside of each work area.
 - 7. Place polyethylene sheeting below area where window caulking/glazing are being removed, both inside and outside the building.
 - 8. Using wet methods, remove the window caulking, glazing compounds in a manner that precludes the materials being removed from being sanded, ground or abraded.
 - 9. Properly decontaminate all non-ACM materials in contact with asbestos containing material and dispose of as construction debris. All non-ACM window components in contact with the asbestos containing material shall be wrapped in two layers of six-mil polyethylene sheeting and disposed of as asbestos contaminated waste. All window caulking and glazing compounds shall also be completely removed from the window opening.
 - 10. Properly wet and double bag all window caulking/glazing, and all non-ACM materials contaminated with asbestos for disposal as ACM.
 - 11. Using a HEPA vacuum, clean all residual asbestos-containing window caulking remaining in the work area.

12. Dispose all asbestos-containing waste in an EPA and DEP approved landfill.
13. Personnel air monitoring of asbestos abatement workers, which demonstrates compliance with the provisions of OSHA 29 CFR, 1926.1101 (f), may be used in lieu of clearance air sampling requirements.

3.03 TEMPORARY PARTITIONS

- A. In general temporary plywood partitions shall be installed inside the space where new window units are to be installed. Partitions shall be parallel to existing outside wall leaving enough room inside the partitioned off space for construction operations.
- B. Upon completion of the installation of the windows in the first opening, temporary partitions shall be completely removed to the location of the next window unit and proceed in the same manner until completion of the work.

3.04 METHODS

- A. Perform the work carefully to prevent damage to existing construction to remain. Any damage to existing structure caused by the Contractor's operations shall be repaired and made good by the Contractor promptly, and without additional cost to the Owner.
- B. The existing flooring in all spaces shall be protected. Any damage to the floor shall be repaired without cost to the owner. Any carpeted floors shall be protected before any demolition takes place in those areas. The protection shall remain throughout the window installation and the carpet shall be vacuumed at the completion of the window installation to restore the carpet to the condition before the work took place. If not restored, then additional measures to vacuuming will be required.

3.05 SECURITY PROGRAM

- A. Work locations must be closed to the public. A security system must be established. Only authorized personnel can enter the work areas.
- B. Emergency exits shall be maintained, or alternate exits provided.

3.06 DISPOSITION OF MATERIALS (Except asbestos containing materials)

- A. Unless otherwise noted on the drawings, all demolished materials shall become the property of the contractor, and together with all debris, shall be removed from the site.
- B. Remove from the premises all demolished materials immediately after demolition unless otherwise directed.
- C. All dumping and disposal shall be carried out in strict adherence to the regulations of the Commonwealth of Massachusetts and the local municipal jurisdiction under which the disposal area is regulated. In addition, the following regulations will be adhered to:
 1. All trucks carrying debris from the demolition operations shall, at all times, be covered to prevent dispersal of load or dust on the streets.
 2. The Contractor will be required to remove from the streets any demolition debris falling from trucks.
- D. Upon completion of demolition, clean the entire area of all debris and leave in an orderly manner.

3.07 DISPOSAL OF ASBESTOS CONTAINING MATERIAL

- A. Waste removal procedures shall be done in accordance with all regulations set forth by the agencies having authority to regulate.
- B. The Contractor shall provide proof that disposal sites for the waste materials have current and valid permits to dump asbestos waste at the time of the pre-construction meeting.

- C. Receipts shall be obtained by the Contractor from the dumping site(s) and submit same to the Owner upon request for final payment.
- D. The Contractor shall be responsible for all necessary precautions to prevent pollution by spilling during the performance of services and shall assume full responsibility for all Contractor caused spills, which shall be cleaned up at the Contractor's expense.
- E. The temporary storage of asbestos waste on the site must be approved by the Owner.
- F. Warning labels having permanent, waterproof paint and adhesive shall be affixed to all bags, trucks, drums (lids and sides) and other containers used to store and/or transport asbestos containing materials. Labels must be conspicuous and legible and contain the following warning

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

END OF SECTION

SECTION 03 30 00

CAST-IN-PLACE CONCRETE PAVING

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon.
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site.

1.02 WORK TO BE PERFORMED

- A. The work of this Section consists of all cast-in-place concrete and concrete paving work as shown on the Drawings and as specified herein, and includes, but is not limited to, the following:
 - 1. Furnishing, placing, curing and finishing of all plain and reinforced concrete work for the new walks and steps.
 - 2. Furnishing and placing of reinforcing steel and related accessories.
 - 3. Furnishing, erection and removal of form work.
 - 4. Furnishing and installation of joint fillers.
 - 5. Concrete mix design.
 - 6. Finishing of exposed concrete surfaces as herein specified.

1.03 REFERENCE SPECIFICATIONS

- A. American Society for Testing and Materials (ASTM): Listed Standards.
- B. American Concrete Institute (ACI): Listed Standards.
- C. ACI 211.1, "Recommended Practice for Selecting Proportions for Normal and Heavyweights."
- D. ACI 211.1, "Recommended Practice for Selecting Proportions for Structural Lightweight Concrete."
- E. ACI 214, "Recommended Practice for Evaluation of Compression Test Results of Field Concrete."
- F. ACI 301, "Specifications for Structural Concrete for Buildings."
- G. ACI 302, "Recommended Practice for Concrete Floor and Slab Construction."
- H. ACI 304, "Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete."
- I. ACI 305, "Recommended Practice for Hot Weather Concreting."
- J. ACI 306, "Recommended Practice for Cold Weather Concreting."
- K. ACI 309, "Consolidation of Concrete."
- L. ACI 311, "Recommended Practice for Concrete Inspection."

- M. ACI 315, "Recommended Practice for Detailing Reinforced Concrete Structures."
- N. ACI 318, "Building Code Requirements for Reinforced Concrete."
- O. ACI 247, "Recommended Practice for Concrete Framework."
- P. CRSI, "Reinforced Concrete - A Manual of Standard Practice."
- Q. CRSI, "Recommended Practice for Placing Reinforcing Bars."
- R. CRSI, "Recommended Practice for Placing Bar Supports."

1.04 SUBMITTALS

- A. Submit shop and erection drawings for reinforcing steel and manufacturer's data for other products for Architect's approval.
- B. Fabrication of any material or performing of any work prior to the final approval of the shop drawings will be entirely at the risk of the Contractor.
- C. The Contractor is responsible for furnishing and installing materials called for in Contract Documents, even though these materials may have been omitted from approved shop drawings.
- D. Before being submitted to the Architect, all shop drawings shall be properly checked and coordinated by the Fabricator and by the Contractor and shall be stamped and signed accordingly. Drawings not complying with these requirements will be returned unchecked and stamped, "Not Accepted."

1.05 TESTING, CONTROL AND INSPECTION

- A. The Contractor shall retain the services of a qualified independent testing agency, approved by the Architect, to test aggregate and to prepare a mix design for each strength of concrete specified; and shall submit such mix designs and test results to the Architect for approval. Mix designs may also be based on proven current designs accompanied by test results. The costs of all such preliminary services shall be borne by the Contractor. All other testing and inspection will be performed by the Owner's testing agency.
- B. A qualified testing agency approved by the Architect for other testing and inspection will be selected by and be paid for by the Owner.
 - 1. Concrete test cylinder sets shall be taken for each 150 cubic yards of concrete placed, but at least one set for each day of concrete placements.
 - 2. Any non-conformance with these Specifications shall be brought to the attention of the Contractor for correction prior to concrete placement.
- C. Cooperate fully with the testing agency's work in taking and storing samples. Provide storage facilities for concrete cylinders at the site. Facilities must protect cylinders from effects of low or high temperatures.
- D. Accept as final results of tests made by the qualified professional testing organization engaged by the Owner.
- E. Testing required because of changes requested by the Contractor in materials, sources of materials, or mix proportions; and extra testing of concrete or materials because of failure to meet the Specification requirements are to be paid for by the Contractor.
- F. Advise the Testing Agency of intent to place concrete by notification at least 24 hours prior to time of placement.
- G. All materials, measuring, mixing, transportation, placing and curing shall be subject to inspection by the Architect or by the Testing Agency. However, such inspection, wherever conducted, shall not relieve the Contractor of his responsibility to furnish materials and workmanship in accordance with Contract requirements, nor shall inspector's acceptance of material or workmanship prevent later rejection of same by the Owner or Architect if defects are discovered.

PART 2 - MATERIALS

2.01 CONCRETE

- A. Portland Cement: ASTM C-150 Type I. All cement shall be from a single source.
- B. Natural Aggregates:
 - 1. Fine Aggregates for Concrete: Shall be natural sand consisting of clean, hard, durable, uncoated particles, conforming to ASTM C33. Organic content shall be determined according to ASTM C40, and supernatant liquid above test samples shall show color no darker than reference standard color solution prepared at same time. Allow no frozen or partially frozen aggregate in the mix.
 - 2. Coarse Aggregate for Concrete: For regular concrete use crushed stone or gravel from approved source conforming to ASTM C33. Coarse aggregate shall not contain greater amount of deleterious materials than specified in Table III, ASTM C33.
- C. Water from approved source, potable, clean and free of oils, salt, alkali, organic matter and other deleterious material.
- D. Admixtures:
 - 1. Water Reducing Agent ASTM C494, Type A: "WRDA" by W.R. Grace Co., or equal approved by the Architect. Water-reducing agent must be by same manufacturer as air-entraining agent.
 - 2. Air-entraining agent ASTM C260: "Darex" by W.R. Grace Co., or equal approved by the Architect. Air-entraining agent must be by same manufacturer as water-reducing agent.
 - 3. Other admixtures may be used, but only with the written approval of the Architect.
- E. Concrete Reinforcement:
 - 1. Welded wire fabric shall conform to ASTM Specification A-185. Supply in flat sheets.
 - 2. Bar supports, metal accessories and other devices necessary for proper assembly of concrete reinforcing shall be of standardized factory-made wire bar supports. All bar supports in exposed concrete shall have plastic tips to prevent rust spots on exposed surfaces. Wire for tying shall be 18 gauge black annealed wire conforming to ASTM Specification A-82.
- F. Form work:
 - 1. Forms: Except for exposed surfaces, form work material shall be exterior "plyform" Class 1, B-B or as approved by the Architect, not less than 5/8 inch thick. For all exposed surfaces plywood forms shall be plastic coated. Provide suitable form inserts for reglets, rustication joints and champhers as required on the Architectural Drawings.
 - 2. Form Oil: Oil shall be of a non-staining type, specifically manufactured for concrete forms.
 - 3. Form Ties: Except for exposed surfaces, factory-fabricated, removable or snap back, of approved design. Wire shall be at least 1-1/2 inch back from surfaces. For all exposed concrete work forms shall be tied in such a way that no evidence of ties is visible on the finished surfaces.
- G. Non-Shrink Grout: Shall be "Embecco 153" by Master Builders, "SonogROUT" by Sonneborn Building Products, "Five Star Grout" by U.S. Grout Corporation, or equal approved by the Architect.
- H. Patching Compound: Shall be "SIKATOP 122" by Sika Corporation, "DARAWELD-C" by W.R. Grace, or equal approved by the Architect.
- I. Chemical surface sealer/hardener for concrete shall be Horne Clear Seal by A.C. Horn Company, Kure-N-Seal by Sonneborn Building Products, Division of Contech, Inc., or approved equal chlorinated rubber base material at 22% solids. The material shall be applied both in accordance with the Manufacturer's recommendations for a curing compound on the wet concrete and as a hardener on fully cured concrete just prior to the occupancy.
- J. Concrete curing membranes shall be:
 - 1. White polyethylene sheeting 4 mils thick, ASTM C171; or
 - 2. Waterproof paper, Sisalkraft Type, ASTM C171-69; or
 - 3. Moisture curing shall be performed as specified in ACI 301 paragraph 12.2.1.1 - 12.2.1.4. Liquid membrane curing compounds may be used, but only with the approval of the Architect.

- K. Joint Filler: Where used with caulking or sealants shall be non-extruding, self-expanding filler strips conforming to ASTM D1752, Type III, and AASHTO N153, Type II, as manufactured by Celotex Corporation, W.R. Meadows, Inc., W.R. Grace and Company, or equal approved by the Architect. Where no sealant or caulking is required, strips may be non-extruding bituminous type in accordance with ASTM D1751.

2.02 STORAGE OF MATERIALS

- A. All materials shall be stored to prevent damage from the elements and other causes.
- B. Cement and aggregates shall be stored in such a manner as to prevent deterioration or intrusion of foreign matter. Any materials which have deteriorated, or which have been damaged, shall not be used for concrete.
- C. Store reinforcement steel on wood skids to protect it from weather, oil, earth and damage from trucking or other construction operations. Reinforcement shall be free from loose mill scale, rust, oil, concrete splatter and other extraneous coatings at the time it is embedded in the concrete.

2.03 CONCRETE MIXES FOR CAST-IN-PLACE CONCRETE

- A. Strength, cement and water requirements

Design Comp.	Min. Lab Str. Testing Age	Min. Cem.Fac.	Maximum Net Water*
<u>Str.fc</u>	<u>7 days</u> <u>28 days</u>	<u>Sacks/cu.yd</u>	<u>Gal/sack cem.</u>
4000 psi	3300 psi 4670 psi	6.5	5.5

* This is total water in mix at time of placement, including free water of aggregates and liquid mixtures.

B. Air-entraining and water-reducing agents shall be used in all concrete in strict accordance with the manufacturer's printed instructions. Total air entrained in freshly-mixed concrete shall be 5.0% plus or minus 1.0% of volume of concrete, except slabs with metallic floor hardener shall contain 2.0% maximum, with required strengths maintained.

- C. Slump of concrete: 4" +/-
- D. Premix admixtures in solution form and dispense as recommended by the manufacturer. Include the water in the solution in the design water content for the mixtures.

PART 3 - EXECUTION

3.01 FORMING FOR CAST-IN-PLACE CONCRETE

- A. ACI 301, latest edition, "Specifications for Structural Concrete for Buildings", Chapter 4 Framework, is hereby made a part of this Specification.
- B. Forms shall be constructed to conform to shapes, lines and dimensions shown, plumb and straight, and shall be maintained sufficiently rigid to prevent deformation under load. Forms shall be sufficiently tight to prevent the leakage of grout. Securely brace and shore forms to prevent the leakage of grout. Securely brace and shore forms to prevent their displacement and to safely support the construction loads.
- C. Treat forms with a form release agent applied according to the manufacturer's instructions, by roller, brush or spray to produce a uniform thin film without bubbles or streaks. Apply the release agent in two coats for the first use of the form and in one coat for each additional use.
- D. ACI-301-89, Section 13.3 - Forms, is also hereby made a part of this Specification.
- E. Forms and shoring for all slabs and beams shall remain in place until the full specified 28 day compressive strength is achieved.

3.02 MIXING PROCESS FOR CAST-IN-PLACE CONCRETE

- A. Ready-mixed concrete shall be mixed and transported in accordance with "Specification for Ready-Mixed Concrete" ASTM C94, Alt. No. 3 and ACI STANDARD 304, "Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete."

3.03 REINFORCING FOR CAST-IN-PLACE CONCRETE

- A. ACI 301, latest edition, "Specification for Structural Concrete for Buildings", Chapter 5 - Reinforcement, is hereby made a part of this Section.

3.04 JOINTS FOR CAST-IN-PLACE CONCRETE

- A. ACI 301-89, "Specifications for Structural Concrete for Buildings", Sections 6.1, 6.2 and 6.3 are hereby made a part of this Specification.
- B. Construction joints shall be formed with keyed bulkheads.
- C. Control joints shall be as shown on the drawings.

3.05 PLACING OF CAST-IN-PLACE CONCRETE

- A. Notify the Architect at least 48 hours prior to each placement.
- B. Do not place concrete until reinforcing steel, inserts, sleeves and other work to be built into the concrete have been inspected and approved by the Architect or the Owner's representative and by all other trades concerned.
- C. In hot weather, all concreting shall be done in accordance with ACI 305, "Recommended Practice for Hot Weather Concreting".
 - 1. When temperature rises above 70 degrees F., all surfaces of concrete shall be protected against rapid drying.
 - 2. Concrete delivered to the forms shall have a temperature of not over 90 degrees F.
 - 3. The temperature of the forms shall be not over 90 degrees F.
- D. In cold weather, all concreting shall be done in accordance with ACI 306, "Recommended Practice for Cold Weather Concreting".
 - 1. When the average daily temperature falls below 40 degrees F., all surfaces of concrete shall be maintained at a temperature of at least 50 degrees F., and not over 90 degrees F, for seven (7) days.
 - 2. Concrete delivered to the forms shall have a temperature of at least 60 degrees F., and not over 90 degrees F.
 - 3. The temperature of the forms shall be at least 40 degrees F.
 - 4. The Contractor shall maintain a record of temperature of the concrete at the most exposed surfaces of each placement at the beginning and at the end of each day of the curing period, which record shall be available to the Architect.
- E. Conveying: Concrete shall be handled from the mixer to the place of final deposit as rapidly as practicable by methods which will prevent separation or loss of ingredients and in a manner which will assure that the required quality of the concrete is retained.
- F. Depositing: Delivery and placement of concrete shall be programmed so that the time lapse between batching and placement shall not exceed 1-1/2 hours. Concrete shall not be allowed a free fall of over 4 feet. Concrete shall be deposited as nearly as practicable in its final position to avoid segregation due to rehandling or flowing.
- G. Concrete shall be deposited continuously, in horizontal layers of such thickness (not deeper than 18 inches) that no concrete will be deposited on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness within the section. Placing shall be carried out at such a rate that the concrete which is being integrated with fresh concrete is still plastic. Concrete which has partially hardened or which has been contaminated by foreign materials shall not be deposited.
- H. Concrete shall be compacted thoroughly by vibrating to produce a dense, homogenous mass without voids or pockets. Vibrators should be placed in concrete so as to penetrate approximately 3 inches to 4 inches into the preceding lift so as to blend the two layers. Vibrating techniques must assure that, when the coarse aggregate reaches the form, it stops and the matrix fills the voids.

- I. The Contractor shall become familiar with ACI-303, Chapter 7 regarding Placing and Consolidation of Architectural Concrete. All applicable recommendations contained within ACI-303 shall be strictly followed.

3.06 STRUCTURAL BACKFILL FOR CONCRETE WALKWAY BASE COURSE

- A. Base course for all pavements, aprons and walks shall be placed and compacted on approved sub-grade to the depth of 12 inches for all pavements and aprons and 8 inches for walks. The base shall be compacted to at least 95 percent of maximum dry density as determined by the Standard AASHTO test T 99-Method C. The structural backfill shall be spread and rolled in layers not exceeding 6 inches in compacted thickness. The surface of 12-inch structural backfill base shall be shaped to the cross section of the road drive or parking lot. Base courses shall be placed only after the sub-grade has been compacted.

3.07 CONCRETE WALKS, STAIRS AND RAMP

- A. Construct walks as shown on plans. Concrete shall be 3,000 psi strength, air entrained.
- B. Expansion joints shall be provided every 24 feet along walks. Expansion joints shall consist of ½" x 3" pre-molded joint filler capped with ½" polyurethane sealant.
- C. Provide a tooled joint pattern of regular sized panels of about six feet square.
- D. Concrete walks shall have a broom finish.

3.08 CURING AND PROTECTION

- A. Protect newly placed concrete against low and high temperature effects and against rapid loss of moisture. Moist cure all concrete for at least seven days at a temperature of at least 50 degrees F by curing methods approved by the Architect.
- B. For vertical or near-vertical surfaces, moist cure by keeping the form in contact with the concrete, or by other effective means approved by the Architect. Intermittent wetting and drying does not provide acceptable curing.
- C. Cure floor slabs by covering with sisal or other waterproof curing paper conforming to ASTM Specifications C 171, lapped 4 inches at edges and sealed with tape at least three inches wide. The paper shall be weighted to prevent displacement, and holes or tears shall be immediately repaired.
- D. The Contractor may submit for the approval of the Architect alternative methods of curing non-exposed concrete surfaces. Approval of the alternatives shall not relieve the Contractor of his responsibility for the proper curing of all concrete.
- E. In hot weather, be adequately prepared to protect the concrete from the adverse influence of heat before the placement of any concrete. Take special precautions to avoid cracking of the concrete from rapid drying during placement of concrete when air temperature exceeds 70 degrees F., particularly when the work is exposed to direct sunlight.
 - 1. Cool forms by fog sprayed with water or by protecting them from the direct rays of the sun.
 - 2. If requested by the Contractor, deemed advisable by the Testing Engineer, and approved by the Architect, a retardant may be used to delay the initial set of the mix.
- F. In cold weather, be adequately prepared to protect the concrete from the adverse influence of cold before placement of any concrete.
 - 1. When the average daily temperature falls below 50 degrees F., take special precautions to assure adequate strength gain of the concrete.
 - 2. When the average daily temperature falls below 40 degrees F., prepare concrete with heated materials such that the concrete delivered to the forms shall have a temperature of at least 60 degrees F., and not over 90 degrees F. Prewarm the forms to at least 40 degrees F., to prevent the rapid cooling of the concrete by their contact; keep forms free of all ice and snow. When heated materials are being used, combine the warm water with the aggregate in the mixer and keep the resulting temperature below 90 degrees F. before cement is added to the mix. Protect all concrete by the use of heated enclosures which must be sufficiently strong and windproof and

within which adequate heaters are properly distributed to maintain all concrete at the required temperatures. Do not allow heaters to locally heat or dry the concrete and do maintain adequate fire precautions.

3.09 ACCEPTANCE

- A. When the tests on control specimens of concrete fall below the required strength, the Architect shall have the right to require, at the Contractor's expense, mix redesign, load tests and/or strengthening as directed, and/or removal and replacement of those parts of the structure in which such concrete was used.

3.10 CLEANING

- A. The exposed faces of the cast-in-place concrete shall be cleaned of all stains, water marks and leaked fines.

END OF SECTION

SECTION 03 73 00

CONCRETE REPAIR

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site

1.02 SCOPE OF WORK

- A. Work includes furnishing all labor, materials, equipment and supervision to accomplish the following concrete foundation repair work.
 - 1. After excavation, visually inspect and sound all concrete foundation surfaces, as a minimum, to identify all deteriorated and cracked concrete and corroded reinforcement.
 - 2. Remove all unsound concrete. Repair all deteriorated concrete and corroded steel reinforcement where discovered during the course of the work.
 - 3. Repair spalled or delaminated concrete.

1.03 RELATED SECTIONS

- A. Section 03 30 00 Cast In Place Concrete Paving – New concrete walks and stoops
- B. Section 07 21 00 Building Insulation
- C. Section 0724 00 Exterior Insulation and Finish System

1.04 SUBMITTALS

- A. Submit the following items to the Architect; do not order materials or start work before receiving the Architects written approval.
 - 1. Samples of or manufacturer's data sheets for all materials to be used, each properly labeled.
 - 2. Manufacturer's MSDS for all materials.
 - 3. Certifications (in time to prevent delay in the work) by the producers of the materials that all materials supplied comply with all the requirements of the appropriate ASTM and ACI Standards.
 - 4. Concrete mix proportions and mixing procedures, and application and curing procedures.
 - 5. Shop drawings of reinforcement and accessories.

1.05 QUALITY CONTROL AND QUALITY ASSURANCE

- A. The contractor shall conduct a quality control program that includes but, is not limited to the following:
 - 1. Inspect all materials to assure conformity with contract requirements and that all materials are new and undamaged.
 - 2. Establish procedures for executing the work.
 - 3. Inspect all surface preparation prior to concrete application.

4. Inspect all reinforcing for placement in plan and elevation.
 5. Inspect work in progress to assure work is being done in accordance with established procedures, manufacturer's instructions, specific architect instructions.
 6. Inspect all work completed, including sounding all repairs to check for debonding, and correction of all defective work.
- B. Qualifications:
1. The contractor shall have at least five (5) years experience installation similar concrete repairs.
 2. The contractor's site superintendent shall have at least five (5) years of experience supervising the installation of similar concrete repairs.
- C. Attend a pre-construction conference to be held with a representative of the Owner, architect, the contractor's field superintendent, foreman, and other trades involved to discuss the conduct of the work of this section.
- D. The Owner's testing agency may conduct the following quality assurance tests:
1. Sample of fresh concrete repair material and testing for compressive strength.
 2. Sounding of all repairs to check for debonding.
- E. Testing laboratory qualifications: Engage independent testing laboratory that meets the approval of the architect. Independent testing laboratory must demonstrate to the architect that it has the experience and capability to conduct the testing indicated without delaying the progress of the work.

1.06 GUARANTEE

- A. Provide a guarantee for all work under this section in a document stating that if, within two years after the Date of Completion of the Work, any of the work of this section is found to be defective or not in accordance with the specifications, the contractor shall correct it promptly after receipt of a written notice from the Owner to do so, unless the Owner has previously given the contractor a written acceptance of such condition. Also, it shall state that the contractor shall bear all costs incurred by the Owner, including reasonable attorney's fees, to enforce compliance with the obligations of this guarantee, and will replace any material or system that requires repeated maintenance or repair. The obligation of this guarantee shall run directly to the Owner, and may be enforced by the Owner against the contractor, shall survive the termination of the contract and shall not be limited by conditions other than this contract.

1.07 TECHNICAL SUPPORT

- A. The contractor shall arrange with the materials manufacturer or distributor to have the services of an experienced installer at the work site prior to any mixing of components to instruct the work crews in the proper mixing and application procedures. He shall remain at the job site after work commences and continue to instruct until he, the contractor, and the Owner are satisfied that the crew has mastered the technique of installing the systems successfully. The contractor shall be completely responsible for the expense of the services of the required manufacturer's field representative.

1.08 GENERAL PROCEDURES

- A. Work only in areas permitted by Owner approved schedule.
- B. Remove all tools, buckets, and materials from work areas and store neatly at a central location daily at the end of work.
- C. Do not stockpile materials, debris or equipment in the building.
- D. Deliver materials clearly marked with legible and intact labels with manufacturers name and brand name, and identifying contents of containers.
- E. Store materials in areas where temperatures and conditions conform with manufacturer's recommendations and instructions.
- F. Protect the building and its contents from all risks associated with the work in this Section. Schedule and execute all work without exposing adjacent building areas to water, dust, debris, fumes and gases or materials used by this contractor. Protect adjacent areas from damage and stains with appropriate barriers and masking. Repair all

damage as a result of the work of this Section to its condition at the start of work or if such can not be determined, to its original condition. Clean all stains by approved means.

- G. Protect the work from damage such as impact, marring of the surfaces, and other damage.
- H. Compliance with OSHA and all other safety laws and regulations is the exclusive responsibility of the contractor and his subcontractor's, supplies and consultants.
- I. Dispose of all debris in a legal manner off the site. Safely conduct debris to trucks or approved containers on the ground. Use specific locations approved by owner for debris collection.
- J. All equipment used on the job shall comply with all applicable health and safety regulations including OSHA guidelines.

PART 2 - PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Manufacturer's products and specifications are generally referred to for identification except as noted, products of the manufacturers meeting are requirements itemized below may be submitted for approval. Unless approved by the architect obtain materials from the same manufacturer.
- B. Materials must be compatible with the foundation Dampproofing material.
- C. Check all specified items upon contract signing, and order early so the work is not delayed.
- D. Do not use materials beyond allowable dates.

2.02 MATERIALS FOR REPAIRING VERTICAL CONCRETE SURFACES

- A. Polymer-Modified Concrete for Patching: Renderoc HB2 or Renderoc HBA by Fosroc Inc. or approved equal.
- B. Flowable Shrinkage Compensated Repair Concrete: Renderoc LA by Fosroc Inc or approved equal.
- C. Reinforcement: Reinforcing bars shall conform to ASTM A615, Grade 60, epoxy coated in accordance with ASTM A775.
- D. Reinforcing Accessories: Provide epoxy-coated accessories.
- E. Tie wire: #16 gauge annealed, epoxy coated.
- F. Protective coating for existing reinforcement and other metal embedments: Nitoprime Zincrich by Fosroc Inc.
- G. Water: potable.

2.03 EQUIPMENT

- A. Concrete mixing equipment for patching of vertical surfaces
 - 1. Mix concrete with mechanical mixers, slow speed drills or mortar mixers.

PART 3 - EXECUTION

3.01 LOCATION OF REPAIR AREAS

- A. The contractor is responsible for visually inspecting and sounding all concrete surfaces as required to identify and repair all deteriorated concrete in accordance with the requirements of the drawings and specifications.

3.02 DEMOLITION AND SURFACE PREPARATION

- A. Provide $\frac{3}{4}$ inch deep saw cut edges around the perimeter of the repair area, normal to the face of the surrounding concrete. Make saw cuts after sufficient concrete is removed to locate and determine actual concrete cover over reinforcing bars. Do not cut into reinforcing bars. Reduce depth of saw cut over reinforcing bars as required.

- B. Remove all loose and unsound concrete in the area to be repaired. Remove concrete to such additional breadth and depth as required to expose uncorroded reinforcement and a surface of sound contaminated concrete. Remove concrete at wall repairs to a minimum depth of $\frac{3}{4}$ inch beyond the outermost layer of replacement. Sound concrete need not be removed beyond reinforcement or inner layers of wall reinforcement unless there is more than one-half the perimeter of the bar is exposed or the bond between the bar and the concrete is destroyed.
- C. Roughen all concrete surfaces to which material is to be bonded to a minimum amplitude of 1/8 inch.
- D. Conduct concrete removal in a manner to prevent cutting, nicking, bending or otherwise damaging the reinforcing bars. Repair or replace accidentally damaged reinforcement at no cost to the Owner.
- E. Remove all loose particles and deleterious materials from the exposed sound concrete and exposed reinforcing bars by sandblasting. Clean metal to SSPC-SP6, commercial blast finish, or better.

3.03 DEMOLITION EQUIPMENT AND PROCEDURES LIMITATIONS

- A. Accomplish initial demolition using chipping hammers no larger than nominal 30 pound class.
- B. Use nominal 15 pound class chipping hammers for finish demolition work such as behind reinforcement and at high spots.

3.04 SUPPLEMENTAL REINFORCEMENT AND REINFORCEMENT COATING

- A. Reinforcing bars with metal loss greater than ten percent of the original bar cross section shall be brought to the attention of the Architect for strength evaluation prior to continuing repair work.
- B. Provide supplemental reinforcement as directed by the Engineer. Tie the reinforcement to existing bars with a minimum lap of 40 bar diameters.
- C. Prior to installation of reinforcement protective coating, inspect the substrate and correct any unsatisfactory conditions. Commencement of work shall constitute contractors acceptance of substrate.
- D. Coat all exposed reinforcement and other exposed metal with protective coating in accordance with the manufacturer's written instructions. Avoid getting protective coating on concrete. Remove any coating that gets on concrete. Minimum dry film thickness shall be 3.0 mil. Do not let more than 1 week pass before placing repair concrete after protective coating is applied.

3.05 FORM WORK

- A. For hand patching with repair mortar, provide two sided impermeable forms securely fastened to the existing concrete so as to allow proper compaction of the mortar in the repair area. Unformed hand patching is not allowed.
- B. Provide water tight forms for placement of flowable concrete or urethane patch repairs; the boundaries of the form should be taped with two sided rubberized asphalt tape. Provide a secondary seal around the perimeter of the form with silicone sealant. Keep Bentonite impregnated oakum on the job for emergency patching of form edges. Provide a chute at the top for introduction of the repair concrete or urethane and release of air from the form and a drain port at the bottom., Alternatively, provide a valve port for introduction of the concrete at the bottom and to one side of the repair and a minimum of two valved ports to vent air at the top of the repair.
- C. Formwork shall be constructed so that the concrete matches the existing surrounding concrete, including joints.

3.06 CONCRETE PLACEMENT – VERTICAL SURFACES

- A. Do not apply materials until the concrete and air temperatures are above 50 degrees F. Temperatures must remain above 50 degrees F during curing.
- B. Conform strictly to the printed instructions of the approved manufacturer.
- C. Repairs with Polymer-modified concrete for patching:

1. After coating on reinforcing has cured and immediately prior to patching, dampen the surface to be repaired with clean water using a portable sprayer. The surface should be saturated surface dry with no glistening water.
2. Using a squeeze bottle, spray liquid polymer component on predampened surface; then scrub the surface with the premixed polymer-modified mortar using a brush or sponge float; the mortar combines with the liquid polymer component to form a thick slurry prime coat. Do not prime until ready to patch. Mortar and concrete must be placed while prime coat is wet. Do not reprime over dried prime coat. Dried prime coat must be removed by mechanical means prior to re-priming.
3. Immediately after prime coat placement apply the polymer modified concrete for patching. Provide a minimum of $\frac{3}{4}$ inch concrete cover over the reinforcing even if this produces a bulge in the surface. Provide a smooth transition at any bulges, or make them inconspicuous. Finish the surface of the repair area to a texture and smoothness to match the adjoining concrete.
4. Tool joints in new concrete to match locations of jointing in surrounding existing concrete.

D. Repairs with Shrinkage Compensated Repair Concrete:

1. After the protective coating on reinforcing bars has cured, flood form with water for several hours.
2. Immediately prior to placement, drain water completely and seal drainage outlets.
3. Provide adequate labor, equipment and materials to ensure that the concrete for each repair is placed within 20 minutes of mixing. If interruption is longer than 20 minutes, a bulkhead must be constructed to achieve a proper construction joint.
4. Provide a means of accurately measuring the amount of water introduced to the mix. Follow manufacturers written directions for addition of water.
5. Ensure proper consolidation in the form using mechanical vibrators as required.

3.07 CURING

- A. Promptly cover unformed repair surfaces with a single layer of wet, well-drained burlap immediately after finishing.
- B. Leave all forms in place for a minimum of 48 hours. Immediately after they are removed, cover the repair surfaces with a single layer of wet, well-drained burlap.
- C. Wet burlap cure the surface for at least 7 days. Keep the burlap continuously wet.
- D. Curing compounds are prohibited.
- E. Appearance of plastic shrinkage cracks due to inadequate finishing and curing shall be cause for rejecting the work so affected. Surface concrete in the rejected area shall be removed and replaced at no additional cost to the owner or his representatives.
- F. During the curing period, the concrete shall be protected from damage due to mechanical disturbances such as shock and vibration due to adjacent construction activity. All finished concrete surfaces shall be protected from damage.

3.08 REMOVAL OF SURFACE DEPOSITS

- A. Stains, efflorescence, fins, mortar and other surface deposits resulting from the work of this section that the Architect finds objectionable shall be removed by sandblasting or other methods acceptable by the Architect.

3.09 REPAIR QUANTITY RECORDS

- A. The contractor shall keep daily records of repair quantities including sketches showing locations and extent of repairs, and records of amount of material placed. Notify the Architect at least 24 hours prior to each placement of repair material. Do not place repair material until surface preparation has been inspected by the Architect.

END OF SECTION

SECTION 06 10 00

CARPENTRY

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- F. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- G. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- H. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- I. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon
- J. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site

1.02 DESCRIPTION OF WORK

- A. Furnish all labor, materials, and equipment necessary for the complete installation of all Carpentry required by the drawings and details, or as specified herein:
 - 1. All temporary work such as barriers, staging, ladders and protection of existing surfaces.
 - 2. Blocking and nailers.
 - 3. Preservative treatment of new blocking and nailers.
 - 4. New window sills and trim work.

1.03 RELATED WORK IN OTHER SECTIONS

- A. The following items are not included in this section and will be performed under the designated sections:
 - 1. Section 02 41 00 – Demolition
 - 2. Section 08 54 13 – Fiberglass windows

1.04 SUBMITTALS

- A. Samples and product data of all materials furnished under this section shall be submitted to the Architect for approval before incorporation into the work.
- B. Product Data:
 - 1. Lumber
 - 2. Preservative Treatment

1.05 DELIVERY, STORAGE AND HANDLING

- A. Store lumber and plywood off the ground in such a manner as to ensure proper drainage, ventilation and protection from the weather.
- B. Store treated lumber under dry conditions.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Lumber for blocking, nailers and miscellaneous wood items shall be Hem-Fir WWP No. 2 or better or approved equal, Fb 850, E 1,300,000.
- B. Provide nails, spikes, bolts, anchors bolts, lag screws and other fastening devices where specified or shown on Contract Drawings or as necessary for completion of the work to anchor Rough Carpentry to adjacent construction. Nails and spikes shall be galvanized.
- B. All new wood blocking shall be "pressure treated": with ACQ-D water based preservatives. No oil-based pentachlorophenol, asphaltic, chromated copper arsenate preservatives or creosote treatments shall be used. Treatment procedure and name of applicator shall be submitted to the Architect to insure that a satisfactory treatment will be obtained. Treatment shall have a noticeable tint to the wood so that treated wood can be visually differentiated from untreated wood.
- C. Interior window sills and apron trim shall be AWI clear red oak with a clear finish.

PART 3 - EXECUTION

3.01 INSTALLATION/APPLICATION/ERECTION

- A. Provide blocking where shown on the drawings.
- B. Perform cutting, fitting, blocking, bracing and centering for other trades as required.
- C. Provide nailers as necessary for the attachment of finish materials.
- C. Fit closely, set accurately to lines and levels, and secure rigidly in place
- D. Install insulation where indicated in the details.

3.02 WINDOW SILLS

- A. Fabricate and install window sills and aprons as detailed on the drawings using clear red oak with a clear finish.

END OF SECTION

SECTION 07 21 00

BUILDING INSULATION

PART 1 - GENERAL

GENERAL INTENT: It is to be noted that a very important general intent for this project is to maintain a fully adhered, continuous air barrier from the lowest point of installation to the top point of installation. It is recognized that several tradesmen will be involved with installing and also maintaining the integrity of that continuous barrier. Therefore, awareness of the intent by each trade involved with the barrier installation is required and overall coordination of the barrier installation is the responsibility of the general contractor. There shall be a mandatory coordination meeting to make all trades aware of this need to maintain consistency of the air barrier.

1.1 SECTION INCLUDES

I. Furnish and install the following:

1. Polyisocyanurate spray insulation at soffits
2. Cellulose insulation at strapped walls and stud walls shall be 3 lb blown –in.
3. EPS Type IX rigid insulation (below grade)

1.2 RELATED SECTIONS

- A. Section 07 24 00 – EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS): Insulation that is installed as part of the EIFS system.

1.3 REFERENCES

- A. Comply with applicable requirements of the following standards and those others referenced in this Section. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
1. ASTM C518: Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
 2. ASTM D2863: Measuring the Minimum Oxygen Concentration to Support Candle-like Combustion of Plastics (Oxygen Index).
 3. ASTM E84: Surface Burning Characteristics of Building Materials.
 4. ASTM E90: Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.
 5. ASTM E96: Water Vapor Transmission of Building Materials.
 6. ASTM E283: Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Differences Across the Specimen.
 7. All applicable federal, state and municipal codes, laws and regulations for thermal insulation.

1.4 DEFINITIONS

- A. The "R-Value" referred to herein refers to the thermal resistance of the insulation alone and does not allow consideration of air spaces or other factors.

1.5 SUBMITTALS

- A. Literature: Manufacturer's product data sheets, specifications, performance data, physical properties for each item furnished hereunder.
- B. Manufacturer's instructions: Manufacturer's installation instructions indicating special procedures, and perimeter conditions requiring special attention.

1.6 QUALIFICATIONS

- A. Applicator, with a minimum of 3 years documented experience demonstrating previously successful work of the type specified herein, and certified by product manufacturer.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.
- B. Store materials under cover and in manner to keep them dry, protected from weather, direct sunlight and damage from construction traffic and other causes.

1.8 ENVIRONMENTAL REQUIREMENTS

A. Toxicity/Hazardous Materials:

1. Outgassing/Reactivity:

- a. Formaldehyde: Products containing urea-formaldehyde will not be permitted.
- b. Chlorofluorocarbons (CFCs)/HCFCs: Products and equipment requiring or using CFCs or HCFCs during the manufacturing process will not be permitted.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Specified Manufacturer: To establish a standard of quality, design and function desired, Drawings and specifications have been based on Icynene, Inc, Mississauga, Ontario Canada. Product: "Polyicynene Spray Insulation", or approved equal.

2.2 MATERIALS

A. Polyicynene Spray Foam Insulation:

- 1. Description: Icynene MD-C-200™ Spray Foam Insulation: Medium-density, conforming to the following:
 - a. Thermal Resistance (for 1 inch of material) (R-Value/inch @140 deg F): ASTM C 518; 6.5 hr. sq ft.degree F/BTU
 - b. Air Permeance (for 1 inch of material): ASTM E 283; <0.02 L/s.m² @75 Pa
 - c. Water Vapor Transmission (for 1.5 inches of material): ASTM E 96; 0.9 perms
 - d. Flame Spread and Smoke Developed Rating: ASTM E 84
 - i. Flame Spread: Less than 25
 - ii. Smoke Development: Less than 450

B. Cellulose Insulation (3 lb):

- 1. Thermal Resistance values shall be R-3.8/inch thickness
- 2. Field-tested bond strength report per ASTM E-736
Tested @ >5 years
Not less than 400 psf
Not less than 600 times its weight @ 1"
- 3. The sprayed cellulose insulation must have been tested in sprayed form by U.L. and have each bag labeled with the reference to U.L. test results according to ASTM E-84/U.L. 723:
Tested at a minimum of 5" thickness, Class I
Flame Spread: Not to exceed 5
Smoke Development: Not to exceed 5
- 4. The sprayed cellulose insulation must meet ASTM E-1042
- 5. Non corrosive per UMB-80
- 6. Bond deflection per ASTM E-759
- 7. Cohesive Strength at time of application per Method WS-2000: > 700 Grams

- C. EPS foundation wall insulation: Shall be Type IX with an R-Value of 5 per inch for a minimum of 2" thick as detailed.

- D. Polyisocyanurate: Shall be Type II, Class2, Grade 2 and comply with ASTM C 1289 and have an R-Value of 5.6 per inch. Used at Wood Box Beam headers.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Comply with manufacturer's written installation instructions for preparing substrates indicated to receive insulation.
- B. Mask and protect adjacent surfaces from overspray or damage.
- C. Remove foreign materials, dirt, grease, oil, paint, laitance, efflorescence, and other substances that will affect application.

3.2 APPLICATION

- A. Apply spray insulation in accordance with manufacturer's written application instructions.
- B. Apply insulation to a reasonably uniform monolithic density without voids.
- C. Apply to minimum cured thickness to fill voids as detailed.

3.3 FIELD QUALITY CONTROL

- A. Inspect application for insulation thickness and density.

3.4 PROTECTION OF FINISHED WORK

- A. Do not permit subsequent work to disturb applied insulation.

END OF SECTION

EXTERIOR INSULATION AND FINISH SYSTEM

PART 1 - GENERAL

GENERAL INTENT: It is to be noted that a very important general intent for this project is to maintain a fully adhered, continuous air barrier from the lowest point of installation to the top point of installation. It is recognized that several tradesmen will be involved with installing and also maintaining the integrity of that continuous barrier. Therefore, awareness of the intent by each trade involved with the barrier installation is required and overall coordination of the barrier installation is the responsibility of the general contractor. There shall be a mandatory coordination meeting to make all trades aware of this need to maintain consistency of the air barrier.

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site

1.02 SUMMARY

- A. The work of this Section consists of exterior insulation and finish system work where shown on the drawings, as specified herein, and as required for a complete and proper installation. Work includes but is not limited to the following:
 - 1. Furnish and Install:
 - a. Polymer based (Class PB, Type A) protective finish coating system, including thermal insulation board, base coating, embedded reinforcing mesh, and integrally colored finish topcoat. The complete system is referred to in the Drawings as "EIFS"
 - b. All related components, including: mastic, control joints, corner beads, casings, fasteners, soffits vents and other accessories.
 - c. Joint sealant and backer materials for junctions with dissimilar materials.

1.03 RELATED SECTIONS

- A. Section 09 29 00 – GYPSUM BOARD SYSTEMS: Installation of metal stud knee walls and soffit walls and sheathing substrate

1.04 REFERENCES

- A. Comply with applicable requirements of the following standards and those others referenced in this Section. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
 - 1. ASTM C 578 – Preformed Cellular Polystyrene Thermal Insulation.
 - 2. ASTM C 1063 – Installation of lathing and furring for Portland cement based plaster.
 - 3. ASTM D 1784 – Polyvinyl chloride material for outdoor exposure.
 - 4. ASTM D 2842 – Water Absorption of Rigid Cellular Plastics.
 - 5. EIMA (EIFS Industry Members Association) Standards and Publications.

- a. 101.01 Standard Test Method for Freeze-Thaw Resistance of Exterior Insulation and Finish Systems (EIFS), Class PB (Modified ASTM C-67)
- b. 101.02 Standard Test Method for Resistance to Water Penetration of Exterior Insulation and Finish Systems (EIFS), Class PB (Modified ASTM E-331)
- c. 101.03 Standard Test Method for Determining Tensile Adhesion Strength of Exterior Insulation and Finish Systems (EIFS), and Components, Class PB (Modified ASTM C-297)
- d. 101.86 Standard Test Method for Resistance of Exterior Insulation and Finish Systems (EIFS), Class PB, to the Effects of Rapid Deformation (Impact).
- e. 105.01 Standard Test Method for Alkali Resistance of Glass Fiber Reinforcing Mesh for Use in Exterior Insulation and Finishing Systems (EIFS), Class PB.
- f. EIMA Guideline Specification for Expanded Polystyrene (EPS) Insulation Board.

1.05 SUBMITTALS

- A. Submit the following under provisions of Section 01330 – SUBMITTAL PROCEDURES:
 - 1. Literature: Manufacturer's product data sheets, specifications, performance criteria, limitations, physical properties on complete system.
 - 2. Manufacturer's installation instructions: Indicate preparation required, installation techniques, environmental restrictions, and jointing requirements.
 - 3. Warranty: Provide sample copies of manufacturers' actual warranties for all materials to be furnished under this section, clearly defining all terms, conditions, and time periods for the coverage thereof.
 - 4. Adhesives and sealants and EPS insulation.
 - 5. Review statement: Written statement, signed by the applicator, stating that the contract drawings have been reviewed by an agent of the exterior insulation and finish system manufacturer; accompanied by a written statement from the manufacturer that the selected finish system is proper, compatible, and adequate for the application shown.
 - a. The applicator will notify the Architect and owner in writing that the existing conditions are in conflict with the Contract Documents for the proper application of the selected finish system.
 - 6. Selection samples:
 - a. Sample card indicating Manufacturer's full range of colors available for selection by architect.
 - b. Provide finish samples as requested, to assist in the Architect's initial selection of colors and textures.

1.06 QUALITY ASSURANCE

- A. System applicator, with a minimum of five years documented experience demonstrating previously successful work of the type specified herein, trained and licensed by product manufacturer.

1.07 DESIGN REQUIREMENTS

- A. Wind Load:
 - 1. Design complete system for maximum allowable deflection, normal to the plane of the wall, of L/240.
- B. Joints.
 - 1. Design minimum ¾ inch wide expansion joints in the EIFS where they exist in the substrate or supporting construction, where the EIFS adjoins dissimilar construction or materials, and at changes in building height.
 - 2. Design minimum ½ inch wide sealant joints at all penetrations through the EIFS.
 - 3. Provide compatible backer rod and sealant that has been evaluated in accordance with ASTM C 1382, "Test Method for Determining Tensile Adhesion Properties of Sealants When Used in Exterior Insulation and Finish System (EIFS) Joints," and that meets minimum 50 percent elongation after conditioning.
 - 4. Design joints with secondary moisture protection and drain joints to the exterior.
- C. Color Selection
 - 1. Finish coat to have a light reflectance value of 20 or greater.
 - 2. Final color selection shall be by the Architect.

1.08 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

- B. Store materials inside under cover and in manner to keep them dry, protected from weather, direct sunlight, surface contamination, corrosion and damage from construction traffic and other causes.
 - 1. Protect adhesives and finish materials from freezing.
 - 2. Rigid insulation materials are combustible and may constitute a fire hazard, do not expose insulation materials to open flames or other ignition sources, comply fully with manufacturer's recommendations and the requirements of local authorities having jurisdiction, for delivery, handling, storage and installation.

1.09 PROJECT CONDITIONS.

- A. Install all materials in strict accordance with all safety and weather conditions required by the system manufacturer.
- B. Maintain minimum ambient temperature of 50 degrees Fahrenheit during, and the 24 hours after, the work of this section.
- C. Do not apply materials to a substrate surfaces whose temperature is below 40 degrees Fahrenheit.

1.10 WARRANTY

- A. Provide manufacturer's standard 7 year warranty under provisions of Section 01 70 00 –PROJECT CLOSEOUT. Warranty shall include coverage of materials and workmanship of installation.

1.11 EXTRA MATERIALS

- A. Provide to the Owner, finish repair/patch kit for future touch-up by the Owner.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Manufacture and type: To establish standards of quality, design and function desired, the specifications have been based on Sto Finish Systems Division, "Classic System". Manufacturers offering the following products are considered similar; under provisions of Massachusetts General Laws, Chapter 149, other equal systems may be considered for acceptance as an equal by the Architect upon submission of complete product information during the bidding period.
- B. Manufacturers: Subject to compliance with the requirements specified herein, and Architect's/Engineer's approval, manufacturers offering products which may be incorporated in the work include the following, or approved equal:
 - 1. Conproco, Concord, NH
 - 2. Pyrex Inc., Redan, GA
 - 3. Senergy Inc., Cranston, RI
 - 4. Sto Finish Systems, Atlanta, GA

2.02 SYSTEM COMPONENTS

- A. Molded Polystyrene Nominal 1.0 lb/ft³ (16 kg/m³) Expanded Polystyrene (EPS) Insulation Board in compliance with ASTM C 578 Type 1 Requirements, and EIMA Guideline Specification for Expanded Polystyrene (EPS) Insulation Board; complying with requirements of finish system manufacturer. Maximum R-Value shall be 4.17 per inch.
 - 1. Factory prefabricated foam custom shaped cornice elements, engineer and include all internal reinforcing such as embedded metal channels to meet design requirements including wind loading.
- B. Primer adhesive: as recommended by Manufacturer.
- C. Ground Coat: Equal to Sto Industries: Sto RFP

D. Finish Coat: Acrylic based textured wall coating with graded marble aggregate, equal to Stolit 1.0.

1. Color: Custom color to match Architect's sample.

E. Reinforcing Meshes:

1. Ultra-High Impact Mesh

a. Sto Armor Mat: Nominal 15 oz./ yd² (509 g/m²), ultra-high impact, double strand, interwoven, open-weave glass fiber fabric with alkaline resistant coating for compatibility with Sto materials. Required for entire installation. Achieves Ultra-High Impact Classification when applied beneath Sto Mesh).

2. Specialty Meshes:

a. Detailing mesh used for EIFS backwrapping and detailing: Nominal 4.5 oz/yd² (153 g/m²), flexible, symmetrical, interlaced glass fiber fabric, with alkaline resistant coating.

b. Corner protection mesh: Nominal 7.8 oz/yd² (265 g/m²), pre-creased, heavy-duty, open-weave woven glass fiber fabric with alkaline resistant coating.

2.03 ACCESSORIES

A. Adhesive: One-component, polymer-modified, cement based high build adhesive equal to Sto BTS Plus.

B. Polyvinyl chloride accessories conforming to ASTM D 1784m fir exterior exposure as manufactured by Plastic Components, Inc., Miami, FL., or equal.

1. Starter strip: J bead with 2 inch leg and 2 inch drip edge, designed for insulation equal to Plastic Components, Inc., No. CB-xx-16L.

C. Air and vapor barrier: Equal to STO Guard Fluid Applied Waterproof Air Barrier Membrane.

D. Sealant materials as recommended by coating manufacturer and compatible with adjacent materials to which the sealants will be applied.

E. Joint Reinforcements

1. StoGuard Mesh: Nominal 4.2 oz/yd² (142 g/m²) self-adhesive, flexible, symmetrical, interlaced glass fiber reinforcing mesh, with alkaline resistant coating for compatibility with Sto materials.

2. StoGuard Fabric: non-woven integrally reinforced cloth reinforcement.

3. StoGuard RediCornerTM: non-woven integrally reinforced pre-formed cloth.

F. Transition membranes

1. Sto Gold Fill with StoGurad Mesh: ready mixed flexible trowel or spray applied air barrier material with treated glass fiber reinforcing mesh.

2. StoGuard RapidSeal or StoGuard RapidSeal with StoGuard Mesh: moisture cure elastomeric waterproof air barrier material with treated glass fiber reinforcing mesh (where applicable)

3. Sto VaporSeal with StoGuard Fabric: flexible waterproof air barrier membrane material with non-woven integrally reinforced cloth.

4. StoGuard Tape: self adhering rubberized asphalt tape with polyester fabric facing.

G. Primers

1. StoGuard Primer: rubber resin emulsion primer for use with StoGuard Tape to enhance adhesion and allow installation down to 35 degrees F (1.7 degrees C).

PART 3 – EXECUTION

3.01 EXAMINATION

A. Inspect all surfaces and verify that they are in proper condition to receive the work of this section. Verify that substrate and adjacent materials are dry. Verify that substrate is flat, free of irregularities.

B. Beginning of installation means acceptance of existing substrate and site conditions.

3.02 INSTALLATION OF INSULATION

- A. Install air infiltration barrier and insulation in accordance with manufacturer's instructions.
- B. Install boards on wall surface horizontally.
- C. Place boards in a method to maximize tight joints, ensure that joints between boards are no greater than 1/16 inch joint. Apply boards over dry substrates in courses, stagger vertical joints to produce a running bond pattern.
 - 1. Interlock ends at internal and external corners.
 - 2. Trim the lower face of insulation boards to provide a snug friction fit into the starter track.
 - 3. Make flush any irregularities projecting more than 1/32 inch from surface of insulation; do not create depressions deeper than 1/16 inch.
 - 4. Cut insulation to fit openings, corners, and projections and to produce edges and shapes conforming to details indicated. Interrupt insulation at expansion joints in substrates. Butt board edges tight to protrusions.
 - 5. Cut insulation board in an L-shaped pattern to fit around openings. Do not align board joints with corners of openings.
- D. Secure boards to substrate by 3 continuous beads, full 1/8 inch thick bed, of adhesive to achieve continuous flush insulation surface.
- E. After insulation boards are firmly adhered to the substrate, fill any open joints in the insulation board layer with slivers of insulation or approved spray foam.
 - 1. Rasp the insulation board surface to achieve a smooth, even surface and to remove any ultraviolet ray damage.
- F. Treat exposed edges of insulation board by encapsulating with base coat, reinforcing fabric, and finish coat.

3.03 APPLICATION OF COATING

- A. Install air infiltration barrier, primer adhesive, coating and reinforcement in accordance with manufacturer's instructions.
- B. Lap reinforcement edges and ends 2-1/2 inches. Wrap insulation board with reinforcement at all termination points, except when manufacturer recommends trim accessories.
 - 1. Apply detail mesh at trim, reveals and projecting architectural features. Embed the mesh in the wet base coat. Trowel from the base of reveals to the edges of the mesh.
 - 2. Ultra high impact mesh application: Apply base coat over the insulation board with stainless steel trowel to a uniform thickness of approximately 1/8 inch. Work horizontally or vertically in strips of 40 inches, and immediately embed the mesh into the wet base coat by troweling from the center to the edge of the mesh. Overlap mesh not less than 2-1/2 inches at mesh seams and at overlaps of detail mesh. Feather seams and edges. Double wrap all inside and outside corners with minimum 2-1/2 inch overlap in each direction. Avoid wrinkles in the mesh. The mesh must be fully embedded so that no mesh color shows through the base coat when it is dry. Re-skim with additional base coat if mesh color is visible.
 - 3. Allow base coat to thoroughly dry before applying primer or finish.
- C. Trowel finish to a thickness equal to aggregate diameter, and embed finish aggregate. Conform to manufacturer's standard finish matching accepted shop sample.
- D. Apply finish coat over dry base coat in thickness required by system manufacturer to produce a uniform finish of texture and color matching approved sample.
 - 1. Apply finish directly over the base coat (or primed base coat) when dry. Apply finish by spraying or troweling with a stainless steel trowel, depending on the finish specified. Follow these general rules for application of finish:
 - a. Avoid application in direct sunlight.
 - b. Apply finish in a continuous application, and work to an architectural break in the wall.

- c. Weather conditions affect application and drying time. Hot or dry conditions limit working time and accelerate drying. Adjustments in the scheduling of work may be required to achieve desired results; cool or damp conditions extend working time and retard drying and may require added measures of protection against wind, dust, dirt, rain and freezing. Adjust work schedule and provide protection.
 - d. Float "R" (rilled texture) finishes with a plastic trowel to achieve their rilled texture.
 - e. Do not install separate batches of finish side-by-side.
 - f. Do not apply finish into or over sealant joints. Apply finish to outside face of wall only.
2. Do not apply finish over irregular or unprepared surfaces, or surfaces not in compliance with requirements of the project specifications.

END OF SECTION

SECTION 07 62 00

SHEET METAL FLASHING AND TRIM

PART 1 – GENERAL

1.1 GENERAL PROVISIONS

1. Work of this Trade Contract includes all individual specification sections listed in Section 07 00 02.

1.2 SECTION INCLUDES

A. Furnish and install the following:

1. Aluminum flashings and running sheet metal work.
2. Aluminum flashing.
3. Formed brake-metal work.
4. Sealant in conjunction with sheet metal work specified herein.

1.3 RELATED SECTIONS

- A. Section 07 21 00 – Building Insulation: Flashing at masonry, installation of reglets furnished by this Section.
- B. Section 07 24 00 – Exterior Insulation and Finish System
- C. Section 08 54 13 – Fiberglass Windows
- D. Section 07 92 00 - JOINT SEALANTS: Sealant and backing material not specified herein

1.4 REFERENCES

- A. Comply with applicable requirements of the following standards and those others referenced in this Section, under the provisions of Section 01 42 00 - REFERENCES. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
 1. ASTM B 209 - Specification for Aluminum Alloy, Sheet and Plate.
 2. ASTM B 221 - Specification for Aluminum Extrusions.
- B. The following reference materials are hereby made a part of this Section by reference thereto:
 1. SMACNA - Architectural Sheet Metal Manual 6th Edition, referred to herein as "Sheet Metal Manual".

1.5 SUBMITTALS

A. Submit the following under provisions of Section 01 33 00 - SUBMITTAL PROCEDURES:

1. Literature: Manufacturer's data sheets for each metal type and accessories furnished hereunder, include material specifications, performance data, physical properties and finishes.
2. Certification: Provide certifications that materials and systems comply with the specified requirements for the use indicated.
3. Shop drawings:
 - a. Fully dimensioned large scale design details showing material profiles, splices, flashing terminations and other jointing details, fastening methods and installation details. Indicate material type, sizes, and weights or gages. Indicate extent of adjacent work specified under other Sections of the Specifications.
 - b. Fully detail methods of relieving stresses due to thermal movement, including sealing of expansion seams.
 - c. All details bearing dimensions of actual measurements taken at the project.
1. Selection Samples:
 - a. Metal sample chips, indicating Manufacturer's full range of finish colors for factory finishes available for selection by Architect.
 - b. Manufacturer's sample boards for sealant colors.

1.6 QUALITY ASSURANCE

- A. Company specializing in fabrication and installation of sheet metal flashing work with minimum 5 years documented experience.
- B. Flashing and sheet metal applicator, with a minimum of 5 years documented experience demonstrating previously successful work of the type specified herein, and approved by product manufacturer.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Store preformed and prefinished material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials during storage which may cause discoloration, staining, or damage.

1.8 SEQUENCING AND SCHEDULING

- A. Coordinate the installation of flashings and sheet metal work with the various trades responsible for installing interfacing materials, and install the work at appropriate times so as not to delay the progress of related work.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Acceptable Substitutions: The products specified herein establish standards of quality, design and function desired. Under provisions of Massachusetts General Laws, Chapter 149, other equal products not named herein, may be considered for acceptance as an equal by the Architect upon submission of complete product information as described in Section 01 25 13 - PRODUCT SUBSTITUTION PROCEDURES. Further additional information may be requested by the Architect for determination that the proposed product substitution is fully equal to the specified product(s). There is no guarantee that proposed substitutions will be approved, and the General Contractor is hereby directed not to order any materials until said approval(s) are received in writing.

2.2 MATERIALS

- A. Aluminum flashing: FS QQ-A-250d sheet aluminum, mill finish, having a minimum thickness as specified herein below, for applications where indicated:
 - 1. Exposed to weather flashings and trim: 0.050 inch thick
 - 2. Aluminum Finish:
 - a. Polyvinylidene Fluoride (PVDF), Kynar 500 shop applied three coat resin based, high performance thermoplastic organic coating in custom non-standard color to match Architect's sample, conforming to AAMA 605.2, NAAMM - Metal Finishes Manual, and the following.
 - 1) Resin base of 70 percent PVDF by weight, Atochem North America, Inc. product "Kynar 500" or Ausimont USA. product "Hylar 5000".
 - 2) Finish Coating shall be manufactured as one of the following products:
 - a) Glidden Company; product "Visulure".
 - b) Morton International; product "Fluoroceram CL".
 - c) P.P.G. Industries Inc.; product "Duranar XL".
 - d) Valspar Corp., product: "Flurothane".
 - b. Surface Preparation: Properly clean aluminum with inhibited chemical cleaner and pretreat with acid chromate-fluoride-phosphate conversion coating, in accordance with Aluminum Association method AA-C12C42.
 - c. Primer: Corrosion resistant, epoxy or urethane based primer compatible with finish coating, averaging 0.2 to 0.3 mils dry film thickness.
 - d. Finish Coat (Color Coat): Polyvinylidene fluoride enamel averaging 0.70 to 0.80 mil dry film thickness.
 - e. Top Coat: Polyvinylidene fluoride enamel clear top coat averaging 0.45 to 0.55 mils dry film thickness.
 - 3. Color and Appearance: Provide custom color to match Architect's sample. Architect's color sample will be a shade of white however, it will NOT be considered "exotic", "polychromatic", "pearlescent" or "metallic".

2.3 ACCESSORIES

- A. Flashing cement: Trowel grade, composed of selected asphalt, solvents, and non-asbestos fillers, conforming to FS SS-C-153 Type 1, ASTM D 2822, Type 1 and ASTM D 4586, Type 1 (Non-asbestos) as manufactured by Karnak Chemical Corporation, product N°. 19 “Flashing Cement” , or equal as manufactured by Koch Materials Company, J & P Petroleum Products Company or other approved manufacturer.
- B. Dampproofing mastic: Trowel grade, self-priming type composed of selected asphalt, solvents, fibers and non-asbestos fillers, conforming to ASTM D 2822, Type 1 and ASTM D 4586, Type 1 (Non-asbestos) as manufactured by Karnak Chemical Corporation, product N°. 86 “Fibrated Trowel Mastic” , or equal as manufactured by Koch Materials Company, J & P Petroleum Products Company or other approved manufacturer.
- C. Nails shall not be smaller than N°.2 of 12 stub gauge (1.109 inches), with large flat heads, and of sufficient length to penetrate the wood nailers a minimum of 7/8-inch. Nails shall be stainless steel.
- D. Screws: Stainless steel wood screws, of sizes most appropriate for the specific application, and equipped with soft neoprene washers.
- E. Joint Sealer: Low modulus single component gun-grade polyurethane sealant, non-sagging, conforming to FS TT-S-000227E, Type II, Class A, and ASTM C 920, Type S, Class 12-1/2, Grade NS, use NT,M, A and O with a minimum movement capability of ± 25 percent, equal to the following:
 - 1. Mameco International, Inc., product “Vulkem 116”.
 - 2. Sika Corp., Lyndhurst NJ; product, “Sikaflex”.
 - 3. Sonneborn Building Products Inc., Minneapolis MN.; product, “Sonolastic NP1”.
 - 4. Tremco, Beachwood OH.; product, “Dymonic”.
 - 5. Pecora Corporation, Harleysville PA.; product “Dynatrol I”.
- F. Plastic cement as recommended by roofing manufacturer and eave protection manufacturer.

2.4 FLASHING FABRICATION - GENERAL

- A. Form flashings as required, or to profiles indicated on the Drawings, to protect materials from physical damage and shed water.
- B. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance. To the greatest extent applicable, fabricate sheet metal components in shop, and thoroughly clean all joints on both sides of the sheet metal work.
- C. Form pieces in longest practical lengths, with flat lock seams. Hem exposed edges on underside 1/4 inch, miter and seam corners.
- D. Fabricate corners from one piece with minimum 18 inch long legs, solder for rigidity, seal with sealant.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Beginning of work shall constitute acceptance of the conditions of the surfaces to which this work is to be applied.

3.2 PREPARATION

- A. Field measure site conditions prior to fabrication.
- B. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
- C. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- D. Seal all aluminum joints watertight.
- E. During the installation of work of this Section, protect the work of other trades against undue soilage and damage by the exercise of reasonable care and precautions. Repair or replace any work so damaged and soiled.

3.3 FLASHING INSTALLATION - GENERAL

- A. Except as otherwise shown on the reviewed shop drawings or specified herein, the workmanship of sheet metal work, method for forming joints anchoring, cleating, provisions for thermal movement, etc., shall conform to the standard details and recommendations of the sheet metal producer and those of producer organizations and research institutions and associations concerning the sheet metal used, in addition to the standards and details set forth in the referenced materials specified this Section.
- B. Face nailing will not be permitted, concealed cleating or other concealed method must be used to attach sheet metal work to structure.

- C. Ensure that fastenings do not exceed 8 inches on centers. Use flat head fasteners throughout, and seal all fastener heads after installation thereof.
- D. Fill all slip joints and overlapping surfaces in the assembly with specified sealant material, removing all excess sealant material from the prefinished surfaces immediately, to prevent staining the finish.
- E. Install continuous vents full length of soffits, unless otherwise indicated.

3.4 CLEANING

- A. Daily clean work areas by sweeping and disposing of debris.
- B. Upon completion of the work of this Section in any given area, remove tools, equipment and all rubbish and debris from the work area; leave area in broom-clean condition.

END OF SECTION

SECTION 07 92 00

JOINT SEALANTS

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site

1.02 SECTION INCLUDES

- A. General requirements and definition of joint sealer types for sealant work specified under other individual specifications.
- B. Prepare sealant substrate surfaces.
- C. Furnish and install sealant and backing.
- D. At cracks in foundation greater than 1/2", sawcut and provide backer rod and sealer.
- E. At cracks in foundation less than 1/2", provide joint sealer

1.03 RELATED SECTIONS

- A. Section 07 62 00 - SHEET METAL FLASHING AND TRIM: Sealant integral with flashing.
- B. Section 08 54 13 - FIBERGLASS WINDOWS: Perimeter sealant at exterior.
- C. Section 09 91 00 - PAINTING: Caulks used in preparation of applied Finish Coatings.
- D. Section 07 24 00 - EXTERIOR INSULATION AND FINISH SYSTEM: Sealant where new EIFS abuts existing brick and at the joint to the new EIFS soffits.

1.04 REFERENCES

- A. Reference Standards: Comply with applicable requirements of the following standards and those others referenced in this Section, under the provisions of Section 01 42 00 - REFERENCES. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
 - 1. ASTM C 717 - Terms Relating to Building Seals and Sealants.
 - 2. ASTM C 790 - Use of Latex Sealing Compounds
 - 3. ASTM C 834 - Latex Sealing Compounds.
 - 4. ASTM C 920 - Elastomeric Joint Sealants.
 - 5. ASTM C 962 - Use of Elastomeric Joint Sealants.
 - 6. ASTM C 1193 - Guide for Use of Joint Sealants.
 - 7. ASTM D 1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.

B. General References The following reference materials are hereby made a part of this Section by reference thereto:

1. SWRI – Sealant and Caulking Guide Specification.

1.05 SUBMITTALS

A. Submit the following under provisions of Section 01 33 00 - SUBMITTAL PROCEDURES:

1. Literature: Manufacturer's product data sheets, specifications, performance data, chemical and physical properties and installation instructions for each item furnished hereunder.
2. Manufacturer's certification that the Products supplied meet or exceed specified requirements.
3. Selection samples: Sample card indicating Manufacturer's full range of colors available for selection by Architect.
4. Verification samples: 12 inch long samples of sealant for verification of color, installed where directed by Architect.

1.06 QUALITY ASSURANCE

- A. Applicator specializing in applying the work of this Section with a minimum of 3 years documented experience approved by sealant manufacturer.
- B. Obtain joint sealers from a single manufacturer for each type specified. Conform to SWRI requirements for installation.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Each container and package must bear an unbroken seal, test number and label of the manufacturer upon delivery to the site. Failure to comply with these requirements shall be sufficient cause for rejection of the material in question, by the Architect and his requiring its removal from the site. New material conforming to said requirements, shall be promptly furnished at no additional cost to the Contract.

1.08 PROJECT CONDITIONS

- A. Do not install single component solvent curing sealant in enclosed building spaces.
- B. Environmental Requirements: Maintain temperature and humidity recommended by the sealant manufacturer during and 24 hours after installation. Do not proceed with installation of joint sealers under the following conditions:
 1. When ambient and substrate temperature conditions are below 40 degrees F.
 2. When joint substrates are wet due to rain, frost, condensation, or other causes.
- C. Do not proceed with installation of joint sealers until contaminants capable of interfering with their adhesion are removed from substrates.

1.09 WARRANTY

- A. Provide 10 year warranty that shall include coverage of installed sealant and accessories which fail to achieve air tight and watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 - PRODUCTS

2.01. MANUFACTURERS

- A. Specified Manufacturers and Products: To establish a standard of quality, design and function desired, Drawings and specifications have been based on the products specified under this section for each individual sealant type, for the applications scheduled at the end of Section, and as may be additionally identified on the Drawings.
- B. Acceptable Manufacturers: Subject to compliance with the requirements specified herein, manufacturers offering products which may be incorporated in the work include the following, or approved equal:
 1. Dow Corning Corporation, Midland MI.

2. General Electric Company (GE Silicones) Waterford NY.
3. Pecora Corporation, Harleysville PA.
4. Sika Corp, Lyndhurst NJ.
5. Sonneborn Building Products Inc., Minneapolis MN.
6. Tremco, Beachwood OH.
7. United States Gypsum Company, Chicago IL.

2.02. SEALANT MATERIALS

- A. Joint Sealer Type AP (Acrylic painters caulk): One component acrylic latex caulking compound, conforming to FS 19-TP-21M and ASTM C 834, paintable within 24 hours after application, with a minimum movement capability of ± 12.5 percent, equal to one of the following:
 1. Sonneborn Building Products Inc., Minneapolis MN.; product, "Sonolac".
 2. Tremco, Beachwood OH.; product, "Tremflex 834".
 3. Bostik; product, "Chem-Calk 600".
 4. Pecora Corporation, Harleysville PA.; product "AC-20+".
- B. Joint Sealer Type P1 (Polyurethane 1-component): Low modulus single component gungrade polyurethane sealant, non-sagging, conforming to FS TT-S-000230C, Type I, Class A, and ASTM C 920, Type S, Class 12-1/2, Grade NS, use NT, M, A and O with a minimum movement capability of ± 25 percent, equal to the following:
 1. Pecora Corporation, Harleysville PA.; product "Dynatrol I".
 2. Sika Corp., Lyndhurst NJ; product, "Sikaflex".
 3. Sonneborn Building Products Inc., Minneapolis MN.; product, "Sonolastic NP1".
 4. Tremco, Beachwood OH.; product "Vulkem 116", or "Dymonic".
- C. Joint Sealer Type P2 (Polyurethane, Multi-component): Low modulus type, Multi-component non-sagging gun-grade polyurethane sealant, conforming to FS TT-S-000227E, Type II, Class A, and ASTM C 920, Type M, Class 25, Grade NS, use NT, M, A and O with a minimum movement capability of ± 50 percent, equal to the following:
 1. Tremco, Beachwood OH.; product "Dymeric 240 / Dymeric 240FC".
 2. Sonneborn Building Products Inc., Minneapolis MN.; product, "Sonolastic NP2".
 3. Pecora Corporation, Harleysville PA.; product "Dynatrol II".
 4. Sika Corp, Lyndhurst NJ.; product, "Sikaflex 2CNS".
- D. Joint Sealer Type SC (Silicone, general construction): One-part medium modulus, natural cure, synthetic sealant, having a useful life expectancy of at least 20 years, conforming to ASTM C 920, Type S, NS, Class 25, use NT, G, A, M, O with a minimum movement capability of ± 50 percent, equal to the following:
 1. Dow Corning Corporation, Midland MI.; product, "791".
 2. General Electric Company (GE Silicones) Waterford NY.; product, "Silpruf".
 3. Pecora Corporation, Harleysville PA.; product, "895".
 4. Sika Corp, Lyndhurst NJ.; product, "Sika Sil-C 995".
 5. Sonneborn Building Products Inc., Minneapolis MN.; product, "Sonolastic - OmniSeal".
 6. Tremco, Beachwood OH.; product, "Spectrem 2".
- E. Joint Sealer Type SE (Silicone, Exterior construction): One-part low modulus, moisture curing, synthetic rubber sealant, having a useful life expectancy of at least 20 years, conforming to ASTM C 920, Type S, NS, Class 25, FS TT-S-001543A, Type, Class A with a minimum movement capability of +100 percent and -50 percent, equal to the following:
 1. Dow Corning Corporation, Midland MI.; product, "790".
 2. General Electric Company (GE Silicones) Waterford NY.; product, "SilPruf LM".
 3. Sika Corp, Lyndhurst NJ.; product, "Sika Sil-C 990".
 4. Tremco, Beachwood OH.; product, "Spectrem 1".

2.03. ACCESSORIES

- A. Compressible joint bead back-up: Compressible closed cell polyethylene, extruded polyolefin foam or

polyurethane foam rod, 1/3 greater in diameter than width of joint. Shape and size of compressible back-up shall be as recommended by manufacturer for the specific condition used. Provide one of the following, or equal. (only closed cell rods will be considered)

1. Chargar Corporation, Hamden, CT, product "Green Rod".
 2. Holdfast Technologies, LCC, Medway, OH, product "Tri-Rod".
 3. Industrial Thermo Polymers Ltd., Buffalo, NY, product "ITP Standard Insulating Backer Rod".
 4. Sonneborn Building Products Inc., Minneapolis MN, product "Sonofoam".
 5. W.R. Meadows Inc., Hampshire, IL, product "Sealtight Cera-Rod".
- B. Primers: Furnish and install joint primers of the types, and to the extent, recommended by the respective sealant manufacturers for the specific joint materials and joint function.
- C. Bond-breaker tape, and temporary masking tape: Of types as recommended by the manufacturer of the specific sealant and caulking material used at each application, and completely free from contaminants which would adversely affect the sealant and caulking materials.

PART 3 - EXECUTION

3.01. EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02. PREPARATION

- A. General:
1. Weather conditions must be dry and of the temperature, as recommended by sealant manufacturer, during application operations.
 2. Surface receiving work of this section must be absolutely dry and dust free. All joints receiving sealant/caulking materials and primers shall be subject to the approval of the sealant manufacturer for proper use of specified materials.
- B. Thoroughly clean all joints, removing all loose mortar, oil, grease, dust, frost, and other foreign materials that will prevent proper adhesion of primers and sealant materials.
1. Clean ferrous metals of all rust and coatings by wire brush, grinding or sandblasting. Remove oil, grease and protective coatings with cleaners recommended by sealant manufacturer.
- C. Prime joint substrates, as recommended in writing by joint-sealant manufacturer, as based on preconstruction joint-sealant-substrate tests or as based upon prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- D. Verify that joint backing and release tapes are compatible with sealant.
- E. Perform preparation in accordance with ASTM C 804 and C 790 for solvent and latex base solvents, respectively.

3.03. INSTALLATION

- A. Install joint bead back-up in all joints in excess of 5/8-inch depth, and joints that have no back-up therein, placing the joint bead in the joint in a manner that will assure a constant depth 1/8 inch greater than the sealant and caulking material depth tolerances.
1. Set beads into joints continuously, by slightly stretching during placement, to permit compression against sides of joint, without surface wrinkles or buckles.
 2. Do not stretch back-up material into joints.

- B. Install bond breaker in joints where shown in the Drawings and wherever recommended by the sealant manufacturer to prevent bond of the sealant to surfaces where such bond might impair the Work.
- C. Apply masking tape or other precautions to prevent migration or spillage of materials onto adjoining surfaces.
- D. Apply urethane sealant and latex caulking materials into joints in accordance with manufacturer's instructions, using mechanical or power caulking gun equipped with nozzle of appropriate size, with sufficient pressure to completely fill the joints.
 - 1. The depth of sealant and caulking materials shall be in accordance with manufacturer's recommendations for the specific joint function, but in no case exceed 1/2-inch in depth, nor less than 1/4-inch, regardless of the joint width.
 - 2. Maintain the outer edge of the sealant and caulking materials, where side faces of joints are in the same plane, back 1/8-inch from the faces.
 - 3. Apply sealant in continuous beads without open joints, voids or air pockets so as to provide a watertight and airtight seal for the entire joint length.
 - 4. After placement of the sealant and caulking materials, concave-tool the surfaces to uniform density, using a water-wet tool. Do not use detergents or soapy water for the tooling operations.
 - 5. Remove the temporary masking tape immediately after tooling, and before the sealant or caulking material has taken initial set.

3.04. CLEANING

- A. Clean all surfaces of adjacent surfaces which have been marked or soiled by the work of this Section, removing all excess sealant and caulking materials with solvents which will not damage the surfaces in any way.

3.05. PROTECTION

- A. During the operation of sealant work, protect the work of other trades against undue soilage and damage by the exercise of reasonable care and precautions. Repair or replace any work so damaged and soiled.

3.06. SCHEDULE

- A. General: Seal joints indicated and all interior and exterior joints, seams, and intersections between dissimilar materials.
- B. Sealant Colors: Shall be selected by the Architect
- C. Exterior joints (Listed by primary building material abutting sealant joints):

- 1. Concrete (including precast):

<u>Joint Condition</u>	<u>Sealant Type</u>
a. Concrete to concrete, vertical control joints:	P2
b. Concrete foundation walls to abutting concrete, and other non-bituminous pavements, steps, platforms, and ends of ramp, (horizontal joints):	HL2
c. Concrete slabs on grade to abutting non-bituminous pavements (horizontal joints, including pedestrian traffic surfaces):	HL2

- 2. Exterior Masonry:

<u>Joint Condition</u>	<u>Sealant Type</u>
a. Masonry to abutting masonry, stone or concrete or EIFS:	P2
b. Masonry to abutting non-porous materials (painted metals, anodized aluminum, mill finished aluminum, PVC, glass, and similar materials):	SE
c. Masonry to all items which penetrate exterior masonry walls, including, but not necessarily limited to, door frames, louver frames, pipes, vents, and similar items:	SE

3. Exterior Metal:

<u>Joint Condition</u>	<u>Sealant Type</u>
a. Metal to metal:	P1
b. Metal to glass:	SE

D. Interior joints (Listed by primary building material abutting sealant joints):

1. Gypsum Board:

<u>Joint Condition</u>	<u>Sealant Type</u>
a. Gypsum board to metal or wood trim:	AP
b. Gypsum board to abutting surfaces at exposed-to view tops and bottoms partitions and walls:	AP
c. Gypsum board to masonry:	SC
d. Gypsum board to interior door and window frames, penetrating conduits and piping, light-fixtures, AP electrical cover plates, building specialty items, ductwork, grilles, supply diffusers, faucets, piping, escutcheon plates and similar items:	AP

2. Architectural millwork and casework

<u>Joint Condition</u>	<u>Sealant Type</u>
a. Casework to abutting materials, kitchens, toilet rooms and similar "wet spaces":	SM
b. Casework to abutting surfaces: Fiberglass Windows	AP
c. Countertops to abutting wall surfaces and to abutting casework:	SM

3. Interior metal:

<u>Joint Condition</u>	<u>Sealant Type</u>
a. Metal to metal:	SC

END OF SECTION

SECTION 08 10 00

METAL FRAMES AND FIBERGLASS DOORS

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon.
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site.
- F. The City of Newton will be performing a Blower-door and infrared test on the doors. The cost for the test are NIC but any remediation measures required as a result of the test are part of this contract.

1.02 WORK INCLUDED

- A. Furnish all labor, materials, and equipment required for the furnishing of all aluminum doorframes as shown on the Contract drawings or herein specified.
- B. Furnish and install a single FRP door and hardware (at the gymnasium exterior opening)
- C. The existing FRP doors and hardware are to be removed and reinstalled in new aluminum frames.

1.03 RELATED WORK IN OTHER SECTIONS

- A. Finish Hardware is specified in SECTION 08 70 00.

1.04 SHOP DRAWINGS

- A. Shop drawings of aluminum frames and FRP door shall be submitted to the Architect for approval before fabrication. Shop drawings shall include schedules showing sizes, details and locations of all new and re-installed existing doors and new door frames.

PART 2 - PRODUCTS

2.01 FLUSH FIBERGLASS DOOR

- A. For the purpose of establishing a standard of quality, the products of Special Lite, Inc. Decatur, Michigan are specified. Products deemed equal as approved by the Architect in writing may also be used.
- B. General: The new flush door shall be 1-3/4" thick and constructed of aluminum alloy rails and stiles, jointed with steel tie rods, and have an inner core consisting of foamed-in-place urethane.
- C. Fabrication
 - 1. Aluminum allow shall be extruded 6063T5 with a minimum wall thickness of 1/8".

2. Stiles shall be tubular shape to accept hardware as specified.
3. Top and bottom rails shall be extruded with legs for interlocking "rigidity weather bar". Face sheet shall be locked in with extruding interlocking edges. No snap-on trim will be accepted.
4. Joinery shall be 3/8" tie rods, top and bottom, bolted through an extruding spline and 3/16" riveted reinforcing angles and secured with aircraft type units.
5. Core to be urethane foam of 3 pounds per cubic foot density. All doors shall be properly reinforced for hardware before urethane core is foamed in door.
6. Door face sheets shall be backed with 1/8" tempered hardboard for added impact reinforcement
7. Door face sheets shall be fiberglass reinforced polyester, .120" thick with pebble-like embossed finish.
8. Doors shall be fitted with factory installed wire pulls, Special Lite SL-82.
9. Meeting stiles on pairs of doors shall have pile weatherstripping in an adjustable astragal.

2.02 FINISH

- A. All materials shall be bonderized and given a coat of baked-on chromatic rust-inhibitive primer. Finish samples shall be provided for approval and color selections prior to fabrication. The contractor shall submit (4) 4" x 4" samples.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Doors and frames shall be set plumb and true, and all finish hardware shall be installed with sinkages and mortises provided as required. Templates shall be obtained for proper fitting and forming.
- B. After frames are set, touch up any scratched or abraded spots with rust inhibitive paint.

END OF SECTION

SECTION 08 54 13

FIBERGLASS WINDOWS

PART 1 – GENERAL

GENERAL INTENT: It is to be noted that a very important general intent for this project is to maintain a fully adhered, continuous air barrier from the lowest point of installation to the top point of installation. It is recognized that several tradesmen will be involved with installing and also maintaining the integrity of that continuous barrier. Therefore, awareness of the intent by each trade involved with the barrier installation is required and overall coordination of the barrier installation is the responsibility of the general contractor. There shall be a mandatory coordination meeting to make all trades aware of this need to maintain consistency of the air barrier.

1.00 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site.

1.01 SUMMARY

- A. Section included: Fiberglass Reinforced Polymer (FRP) windows of the following type (s):
 - 1. Fixed and Awning windows

1.02 RELATED SECTIONS

- A. Section 07 92 00 - Joint Sealants: Sealants and caulking.

1.03 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
 - 1. AAMA 502 - Voluntary Specification for Field Testing of Windows and Sliding Doors.
 - 2. AAMA 613 - Voluntary Performance Requirements and Test Procedures for Organic Coatings on Plastic Profiles.
 - 3. AAMA 623 07 – Voluntary Specification, Performance Requirements and Test Procedures for Organic Coatings on Fiber Reinforced Thermoset Profiles
 - 4. AAMA 624 07 – Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Fiber Reinforced Thermoset Profiles
 - 5. AAMA 625 07 – Voluntary Specification, Performance Requirements and Test Procedures for Superior Performance Organic Coatings on Fiber Reinforced Thermoset Profiles
- B. American Society for Testing and Materials (ASTM):
 - 1. ASTM C 1036 - Flat Glass.
 - 2. ASTM C 1048 - Heat-Treated Flat Glass--Kind HS, Kind FT Coated and Uncoated Glass.
 - 3. ASTM E 283 - Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Difference Across the Specimen.

4. ASTM E 547 - Water Penetration of Exterior Windows, Curtain Walls and Doors by Cyclic Static Air Pressure Differential.
- C. Window and Door Manufacturers Association (WDMA):
1. ANSI/AAMA/NWDA 101/I.S.2 -97 - Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.
 2. AAMA/WDMA/CSA 101/I.S.2/A440-05 – Standard/Specification for windows, doors, and unit skylights
 3. AAMA/WDMA/CSA 101/I.S.2/A440-08 – NAFS North American Fenestration Standard/Specification for windows, doors, and skylights

1.04 PERFORMANCE REQUIREMENTS

A. Air, Water and Structural Performance

1. Windows shall meet Rating specifications in accordance with ANSI/AAMA/NWDA 101/I.S.2-97, AAMA/WDMA/CSA 101/I.S.2/A440-05, and AAMA/WDMA/CSA 101/I.S.2/A440-08
2. Window Air Leakage, ASTM E 283: Window air leakage when tested at 1.57 psf (25 mph) shall be 0.05 cfm/ft² of frame or less.
3. Window Water Penetration, ASTM E 547: No water penetration through window when tested under static pressure of 12.11 psf after 4 cycles of 5 minutes each, with water being applied at a rate of 8 gallons per hour per square foot.
4. Forced entry resistance not to exceed limits defined by the standard AAMA/WDMA/CSA 101/I.S.2/A440-05.
5. Field testing to verify compliance shall be performed on units of comparable size to gateway test sizes for designated Performance Classes as listed in Table 1 of Section 4.3 of AAMA/WDMA/CSA 101/I.S.2/A440-05

B. Thermal Performance

1. Windows shall meet whole-unit U-Value and SHGC Performance determined in accordance with NFRC 100:

1.05 SUBMITTALS

A. Reference Section 01 33 00 – Submittal Procedures; submit following items:

1. Product Data: Submit manufacturer's product data, including installation instructions.
2. Shop Drawings: Include window schedule, window elevations, sections and details, and multiple window assembly details. Will submit shop drawings as required, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
3. Samples:
 - a. Color samples: Minimum 1 x 3 inch (25 mm x 76 mm) samples of Fiberglass with coating.
 - b. Glass (3) 6" x 6", showing specified tint color.
4. Quality Assurance / Control Submittals:
 - a. Qualifications: Proof of manufacturers qualifications.
 - b. U-Factor and structural rating charts required for AAMA and NFRC labeling requirements.
 - c. Installation Instructions – ref. AAMA installation masters
5. Before installing all of the windows, a single window mock up must be installed to provide exposure to all of the conditions and details for the complete installation of a unit. Upon review and approval, the complete window installation can proceed.

B. Closeout Submittals: submit following items:

1. Maintenance instructions.

1.06 QUALITY ASSURANCE

- A. Overall Standards: Comply with ANSI/AAMA 101.I.S.2, except as otherwise noted herein.
- B. Qualifications:
 - 1. Manufacturer Qualifications:
 - a. Member American Architectural Manufacturers Association (AAMA) and the National Fenestration Rating Council (NFRC)
 - b. IGCC Certified for fabrication of insulated glazing units with suspended film.
 - 2. Product Qualifications:
 - Certifications for insulated glass windows:
 - AAMA: Windows shall be Silver Label certified with label attached to frame per AAMA requirements.
 - NFRC: Windows shall be NFRC certified with temporary U-factor label applied to glass and an NFRC tab added to permanent AAMA frame label.
 - 3. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.04 of this specification. Valid test reports shall be no more than four years old.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Delivery:
 - 1. Deliver materials to site undamaged in manufacturer's original, unopened containers and packaging, with labels clearly identifying manufacturer and product name. Include installation instructions.
- B. Storage:
 - 1. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.
 - (a) Store materials in accordance with manufacturer's instructions.
 - (b) Store materials off ground and under cover.
 - (c) Protect materials from weather, direct sunlight, and construction activities.
- C. Handling: Protect materials and finish during handling and installation to prevent damage.
 - 1. Handle all windows and accessories in accordance with AAMA CW-10.
 - 2. Protect materials and finish during handling and installation to prevent damage

1.08 WARRANTY

- A. 10 year guarantee on windows protecting against defects in materials and workmanship

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. **Serious Materials “X725” Series**
1250 Elko Dr.
Sunnyvale, CA 94089
- B. **Thermotech Windows Ltd.**
42 Antares Drive
Ottawa, Ontario, Canada K2E-7Y4
- C. **Fibertec “300” Standard Series**
280 Bowes Road
Concord, Ontario, Canada L4K-1Z9
- D. Or approved equal

2.02 MATERIALS

- A. Frame and Sash: Pultruded Fiberglass Reinforced Polymer, with color coating.

- B. Hardware: Hardware having component parts which are exposed shall be of stainless steel and of sufficient strength to perform the functions for which they are used. Inoperable windows will have no exposed hardware.
- C. Weather-stripping: Weather-stripping conforming to AAMA 701 or 702. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair. Adhered weather-stripping shall not be allowed.
- D. Screens: Full screens are required at all operable windows.

2.03 ASSEMBLY

- A. Fabricate frames and sash with mitered and mechanically joined corners. Mitered seams shall be sealed thoroughly to prevent air or water penetration
- B. Provide metal or composite reinforcement in sash or frame for attaching operating or locking mechanisms
- C. The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.

2.04 INSECT SCREENS

- A. Provide tight-fitting screen for operating sash with hardware to allow easy removal.
 - 1. Screen Cloth: Charcoal colored fiberglass mesh
 - 2. Frame: Rollformed aluminum with plunger pin

2.05 GLASS AND GLAZING

- A. Overall IG thickness for double pane glass: nominally 1- 1/8"

Thermal performance: The solar Heat Gain Coefficient shall be between 0.27 and 0.31 for fixed and 0.21 and 0.25 for awning windows.
- B. Construction: Individual components shall comply with criteria specified in following paragraphs. Units shall be hermetically sealed and shall comply with ASTM E 2190, Class CBA.
- C. Components:
 - 1. Exterior layer to be Low-E coated float glass of nominal 1/4" (6mm) thickness; per ASTM C 1036: Type 1, Class 1, Quality q3; conforming to ASTM C 1376
 - 2. Exterior glass to be clear annealed
 - 3. Interior layer to be clear float glass of nominal 1/4" (6mm) thickness; per ASTM C 1036: Type 1, Class 1, Quality q3
 - 4. Interior glass to be clear annealed
 - 5. Gas Fill: Each cavity between glass shall be filled with an inert gas / air mixture containing a minimum of 90% Argon gas; units shall be equipped with gas-retention device for shipping.
 - 6. Spacers: shall maintain a nominal dimension of 3/8" (14.2mm) between glass layers and/or suspended film.
 - 7. Edge Sealants:
 - a. Primary: Polyisobutylene sealant complying with ASTM E 774 for glass-to-spacer seals
 - b. Secondary: Polyurethane sealant for perimeter moisture barrier
 - c. Seal durability: conformance to ASTM E 774; visible ALI certification for CBA rating level. Perimeter seals shall maintain a hermetically-sealed, dehydrated condition for the duration of the product warranty.
 - 8. Privacy Film: At the one window that falls within the classroom toilet, a surface applied translucent film shall be applied on the inside surface of the glass. Film shall be as manufactured by 3M or approved equal.

2.06 FINISH (Exterior / Interior)

- A. Frame and Sash colors: White
- B. Color match screen frame to window frame and sash color

2.07 SOURCE QUALITY CONTROL

- A. Windows inspected in accordance with manufacturers Quality Control Program.

2.08 WINDOW TYPES

- A. Thermal Performance: The overall R-Value for the fixed windows shall be a minimum of R-6.67 and R-5.00 for awning windows.
- B. Factory assembled and glazed outward opening fiberglass awning and fixed windows. Overall R Values shall be a minimum R-5.0 for awning and R-6.67 for fixed.
- C. Frame:
 - 1. Chambered, foam filled, pultruded fiberglass
 - 2. Interior Exposed Surfaces: Factory applied coating
 - 3. Overall Frame Depth: 3-1/4 inch (83 mm)
- D. Sash:
 - 1. Chambered, foam filled, pultruded fiberglass
 - 2. Interior Exposed Surfaces: Factory applied coating
 - 3. Minimum 2-1/4 inch (57 mm) deep, chambered, pultruded fiberglass profile.
- E. Sightlines: edge of frame to tip of glazing tower or glass line 2 7/8" (72mm)
- F. Weatherstripping:
 - 1. Double weatherstripping
 - 2. Continuous, flexible PVC type around sash perimeter
 - 3. Foam with fabric skin around frames interior perimeter
- G. Hardware:
 - 1. Operator – steel worm-gear operator, zinc die cast base with painted finish
 - 2. Crank Handle – integrated folding handle with painted finish
 - 3. Locking System – Single handle multi-point with positive action (reaches out and pulls tight).
 - 4. All exposed fasteners- stainless steel
- H. Performance Class Structural
 - 1. Commercial (C)

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine openings in which windows will be installed.
 - 1. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.
 - 2. Verify that framing complies with method of installation
 - 3. Verify that fasteners in framed walls are fully driven and will not interfere with window installation

- B. Coordinate with responsible entity to correct unsatisfactory conditions. Notify Architect of conditions that would adversely affect installation or subsequent use. Do not proceed with installation until unsatisfactory conditions are corrected.
- C. Commencement of work by installer is acceptable of substrate conditions.

3.02 INSTALLATION

- A. Window installed must be a manufacturer approved and certified installer of the windows submitted for use.
- B. Install windows in framed walls in accordance with AAMA 2400, and manufacturer's instruction
- C. Install windows in accordance with manufacturer's instructions.
- D. Install windows to be weather-tight and freely operating.
- E. Maintain alignment with adjacent work.
- F. Secure assembly to framed openings, plumb and square, without distortion.
- G. Integrate window system installation with exterior water-resistant barrier using flashing/sealant tape. Apply and integrate flashing/sealant tape with water-resistant barrier using watershed principles in accordance with window manufacturer's instructions.
- H. Place interior seal around window perimeter to maintain continuity of building thermal and air barrier using insulating-foam sealant.
- I. Seal window to exterior wall cladding with sealant and related backing materials at perimeter of assembly.
- J. Leave windows closed and locked.
- K. Do not remove temporary labels until all windows have been installed
- L. Install insect screens on operable windows

3.03 FIELD QUALITY CONTROL

- A. A field-test for the windows in accordance with AAMA 502, Test Method is required. The costs to conduct this test shall be part of the general contractor's bid.
- B. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- C. An AAMA accredited lab will be hired by the owner to perform the required testing.
- D. Field tested units shall be of comparable size to gateway sizes listed in AAMA/WDMA/CSA 101/I.S.2/A440-05

3.04 CLEANING

- A. Clean window frames and glass in accordance with Division 1 requirements.
- B. Remove temporary labels and retain for Closeout Submittals.
- C. Clean soiled surfaces and glass using a mild detergent and warm water solution with soft, clean cloths.

3.05 PROTECTION

- A. Protect installed windows to ensure that, except for normal weathering, windows will be without damage or deterioration at time of substantial completion.

3.06 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

END OF SECTION

SECTION 08 70 00

FINISH HARDWARE

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site

1.02 WORK INCLUDED

- A. The Scope of the work of this Section of the Specifications shall consist of furnishing all finish hardware as specified and scheduled. Responsibility for receiving, checking, and storing shipments shall be borne by the General Contractor. Installation of finish hardware will be under Section 06 10 00 Carpentry.
- B. Furnish all necessary templates and schedules required to fabricate doors, frames, thresholds, and all work incidental thereto.
- C. It is the intent to provide new hardware for the new FRP door and to reuse existing hardware at all of the existing FRP doors that are to be rehung in new aluminum frames.

1.03 HARDWARE SCHEDULE

- A. Four complete schedules shall be submitted to the Architect for approval, giving the manufacturer's numbers, sizes and installation location for all hardware required to complete the job.

1.04 MARKING AND PACKING

- A. All packages shall be legibly labeled indicating manufacturer's numbers, types, sizes and hardware schedule reference number. All hardware shall be protectively wrapped and shall be packed in the same package as all screws, bolts, and fastenings necessary for the proper installation of all hardware.

1.05 TEMPLATES

- A. All necessary templates and approved schedules required to fabricate doors, frames, and thresholds shall be furnished in sufficient time so as not to impede the progress of work.

1.06 WORKMANSHIP

- A. Lock front, flush bolt face, and strike shall be beveled or rounded as required by the Contract Drawings. The General Contractor shall determine and be responsible for the hand and bevel of all doors.

1.07 SAMPLES

- A. A complete line of samples shall be submitted to the architect for approval when requested. Samples shall be plainly marked with the number indicated in the specifications, the manufacturer numbers, types and sizes. Approved samples will remain with the architect until delivery of all hardware to the project site is completed, then they will be incorporated in the work.

1.08 KEYING

- A. Keying System:
 - 1. The keying for the new door shall match that of the existing doors.
- B. Furnish the following quantity of keys:
 - 1. 3 keys for each cylinder or keyed alike set
- C. Actual keying of the new cylinder shall be done by the City of Newton.

1.09 FINISHES

- A. Finishes shall be as follows unless shown otherwise: (ANSI/BMHA Finish Designations)
 - Hinges: US10
 - Locksets: US10
 - Door Closers: TAN
 - Door Stops: US10

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Hardware shall be best grade, entirely free from imperfections in manufacture and finish. Qualities, weights, and sizes specified herein are the minimum that will be accepted.
 - 1. Include all necessary screws, special screws, bolts, special bolts, expansion shields, reinforcing plates, and other devices necessary or required for proper hardware application. All latches and exit devices shall have box-type strikes; bolts shall have keepers. Floor stops shall be attached with expansion shields.
 - 2. Hinges
 - a. Specified – Stanley – Roton -Continuous
 - b. Substitutions - Hager, McKenney or approved equal
 - 3. Lockset - Cylindrical with Lever Handle w/ interchangeable core
 - a. Specified – Schlage
 - b. Substitutions – Best, Sargent 10 line or equal
 - 4. Exit Device
 - c. Specified – Von Duprin
 - 5. Closer
 - a. Specified - L.C.N.
 - b. Substitutions - Norton, Yale, Sargent 281 series or approved equal
 - 6. Door Stop
 - a. Specified - Glynn Johnson
 - d. Substitutions - Ives, Rockwood or approved equal
 - 7. Thresholds
 - a. Specified – National Guard Products, Inc.

- b. Substitutions – Pemco, Reese or approved equal.
8. Weatherstripping
- a. Specified – National Guard Products, Inc.
 - b. Substitutions – Pemco, Reese or approved equal.

2.02 HARDWARE SETS

- A. The hardware sets listed below indicate the item of hardware required for each opening. It is the bidder's responsibility to accurately furnish the proper sizes, quantities, weights, and functions, as required by Plans, these Specifications, and as recommended by manufacturer's catalogue information.
- B. The following schedule of hardware sets is furnished as information and a guide only. The complete quantity requirements for each and every opening shall be the responsibility of the hardware supplier. Refer to door schedules on the Plans for hardware set required for each opening. Hardware for label doors shall be U.L. listed hardware.
- C. Each entrance shall have cylinder dogging with keyed access.

HW-1

Single Door 3'-0" x 7'-0" x 1- 3/4" fiberglass x new aluminum frame		
(1) Hinges	Roton	Continuous
1 Exit Device	99ODT	
1 Closer	4041 x 4040 – 18G	Provide hold open arm
Weather stripping	703 EV	
Threshold	896P – National Guard	

END OF SECTION

SECTION 09 29 00

GYPSUM BOARD SYSTEMS

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site

1.02 WORK INCLUDED

- A. Furnish all labor, materials, tools and equipment required for the complete installation of all gypsum wallboard systems. Include metal stud and furring systems, ceiling systems, gypsum wallboard, sound attenuation blankets in interior partitions, and all required accessories and fastening devices.

1.03 RELATED WORK IN OTHER SECTIONS

- A. Section 07 21 00 BUILDING INSULATION
- B. Section 07 24 00 EXTERIOR INSULATION AND FINISH SYSTEM
- C. Section 09 91 00 PAINTING

1.04 PROTECTION AND CLEANING

- A. Protect existing and new finishes against soiling and damage from the work of this trade.
- B. Upon completion, remove all rubbish, debris, scaffolding and tools from the work. Clean off any of the materials of this section from glass, brick, trim and all other finish surfaces, and leave the floors "broom clean."

1.05 SAMPLES

- A. Samples of the various materials to be furnished and installed under this section shall be submitted to the Architect for approval before starting the work of this section.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Materials and methods shall be in accordance with manufacturer's printed recommendations.
- B. Wallboard, interior partition framing, furring, ceiling suspension systems, gypsum wallboard, joint tape, joint compounds, thermal insulation, sound attenuation insulation, and other accessories shall be as manufactured by the National Gypsum Co., U.S. Gypsum Co., Johns-Manville, Georgia-Pacific or approved equal. Products of National Gypsum Company are specified to establish type and quality of materials.

2.02 MATERIALS

- A. Gypsum Wallboard - 5/8" thick Sta-Smooth Fire-Shield Wallboard on all wall and ceiling surfaces scheduled to have GWB finish.
 - 1. Wallboard shall be 5/8" thick where one layer is indicated .
- B. "Zee" furring channels shall be screw type furring, depth as shown on the details.
- C. Control Joints - E-Z strip expansion joint.
- D. Screws
 - 1. Drywall to wood framing; Type S Bugle Head
 - 2. Metal components to Concrete or Masonry; HWH Tapcon Anchors
- E. Corner Beads - 1-1/4" x 1-1/4" galvanized standard corner bead with 1/8" ground.
- F. Casing Beads - No. 233 with vinyl gasket
- G. Acoustical Sealant - US Gypsum, National Gypsum or Tremco.
- H. Tape - Gold Bond Joint Tapes
- I. Joint Treatment Compound Sta-Smooth Joint Compound and Ready-Mix Topping Compound or approved equal.
- J. Adhesive - MC Adhesive.
- K. Steel Studs shall be 2 1/2", 4", 6" 22 gauge studs as indicated on the plans.
- L. Soffit framing screw type furring channels @ 16" o .c. supported by cold rolled channels or steel studs in accordance with manufacturers recommendations based on a 15 PSF load.
- M. Exterior sheathing for exterior stud partitions to receive the new EIFS shall be 1/2" Denzglass.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

- A. This Contractor shall inspect job conditions and related work and report to the General Contractor conditions affecting his work. Commencement of work will constitute acceptance of conditions.
- B. Work under this section shall be properly coordinated with the work of other sections. In no case shall work of other sections that will be concealed by the work of this section be so concealed until it has been inspected and approved.
- C. The drawings shall be taken as diagrammatic. This Contractor shall fit his work to the building structure, and other finishes and around mechanical and electrical work previously installed, to produce a finished result.
- D. Protect all gypsum materials from moisture both during shipment and in storage. Do not store outdoors or in potentially damp locations. Protect metal goods from rusting.

3.02 INSTALLATION

- A. Interior partitions shall be constructed with metal studs, sound attenuation blankets and gypsum wallboard as detailed on the drawings.
- B. Wallboard installation shall be in accordance with National Gypsum Co. General Specifications 1 and 2 for Drywall Products and Systems.
 - 1. Gypsum board and all gypsum sheathing shall be installed with drywall screws in all cases.
 - 2. Studs shall be doubled at jambs of all doors and glazed panels,

3. Gypsum wallboard shall be held approximately ½" above the floor and the joint sealed with acoustic sealant.
 4. Noise barrier insulation shall be installed in all interior partitions.
 5. Acoustic sealant and be applied to all joints between gypsum wallboard partitions and adjacent surfaces of dissimilar materials.
 6. Gypsum wallboard partitions shall extend from floor to underside of roof construction above unless otherwise noted on the drawings.
- C. All exterior corners shall be provided with corner beads and where gypsum wallboard abuts dissimilar material a casing bead shall be installed.
- D. Gypsum wallboard shall be installed and finished in accordance with the National Gypsum Company's Architectural Specifications/Drywall Products and Systems using the specified materials.
- E. At exterior sheathing, all joints are to be taped to provide a continuous seal.

END OF SECTION

SECTION 09 91 00

PAINTING

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site

1.02 WORK INCLUDED

- A. The Painting subcontractor shall supply all labor, materials, tools, ladders, scaffolding, and other equipment necessary to the completion of all PAINTING AND FINISHING shown on the drawings and specified herein.
- B. The Contractor shall examine the Specifications for the various trades and become thoroughly familiar with all provisions regarding painting. He shall understand that all surfaces left unfinished by requirements of other Sections of the Specifications shall be painted or finished as a part of this Section.
- C. The Painting subcontractor shall inspect the work prior to the application of the paint.
- D. If the surface cannot be put in proper condition to receive paint by customary cleaning methods, or sanding, or spackling, the Contractor shall notify the Architect or assume responsibility for and rectify any unsatisfactory finishing resulting from his negligence.
- E. Paint all new interior wallboard, all new fiberglass window frames, and other surfaces except as otherwise specified including back-priming of all trim before installation.
- F. Paint all existing surfaces scheduled or required to be painted by the Drawings and this Project Manual. Any existing wall or ceiling patched or disturbed by the renovations shall be completely painted.
- G. The work required by this section is shown on all the drawings.

1.03 RELATED WORK IN OTHER SECTIONS

- A. The following items will be fully finished in manufacture and no field painting will be required:
 - 1. Metal Frames and Fiberglass Doors - Section 08 10 00
 - 2. Fiberglass Windows – Section 08 54 13

1.04 SUBMITTALS

- A. Submit manufacturer's data on all materials for Architect's approval before ordering.

1.05 COLORS

- A. All colors shall be selected and approved by the Architect. If required, three panels of each color and finish shall be prepared in advance with the materials specified, for approval of the Architect.
- B. The Architect shall have the option of using as many different colors and/or shades as necessary to provide a colorful and attractive color scheme.

1.06 STORAGE OF MATERIALS

- A. All paint materials and equipment used shall be stored in no more than a single place. The storage areas shall be maintained and any damage caused by neglect shall be made good by this Contractor.

1.07 DELIVERY

- A. All materials shall be delivered at the site in their original containers with the seals unbroken and labels intact.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All materials shall be first line products of recognized reliable manufacturers: Pratt & Lambert; Benjamin Moore & Co.; Sherwin Williams or approved equal. All paints shall be no VOC acrylic latex semi-permeable.
- B. Provide factory mixed coatings. Do not reduce, thin or dilute coatings or add materials to coatings.
- C. Use of solvents is not permissible.

2.02 PAINTING SCHEDULE (New Surfaces)

- A. To establish a standard of quality the following manufacturer, Benjamin Moore, is used.
 - 1. Gypsum Wallboard
 - 1 coat Benjamin Moore Fresh Start All Purpose Primer (100% acrylic water thinned latex paint)
 - 2 coats Benjamin Moore Natura Interior Waterborne Paint, Semi-gloss 514

PART 3 - EXECUTION

3.01 WORKMANSHIP

- A. All materials shall be used as directed by the manufacturer's printed directions
- B. The workmanship shall be of the very best; all materials evenly spread and flowed on without runs, sags, or excessive brush marks. Only skilled mechanics shall be employed to do finish work.
- C. All surfaces to be clean and free of loose dirt, dust, or grit before painting is started.
- D. No paints or painting materials shall be applied where room temperature is below 60 degrees F.
- E. All scratches, cracks, and openings adjoining trim shall be cut out as required and then filled with spackle or other approved patching plaster. All patches shall be made flush with the adjoining surfaces and must be dry and properly sealed before application of the prime coat.
- F. All metal surfaces shall be solvent cleaned to remove grease and oil. Where rust or scale is present, it must be removed prior to painting. Wire brush or sand to bright metal. If the rust is severe, sandblast or power chip.
- G. All damage to shop prime coat caused by cleaning, repairing, and erection shall be spot-primed with the same material as used for the shop coat.
- H. All undercoats of paint shall be tinted to a color approximating the color of the finish. Permit enough variation in color for guide coat.

- I. All coats shall be thoroughly dry before applying succeeding coats.
- J. Upon completion of the work, all misplaced paint and spots or spills shall be removed and work left in a condition acceptable to the Architect.
- K. Exterior painting shall not be done while the surface is damp, or during rainy or frosty weather, or when the temperature is below 50 degrees F. or above 90 degrees F.

3.02 CLEANUP

- A. Cleaning - At the completion of the work, the Painting Subcontractor shall remove all paint spots and oil or grease stains caused by his work from floors, fixtures, hardware, and equipment, leaving their finishes in satisfactory condition. He shall remove all his staging, equipment, debris, and materials, and leave the site in a clean condition so far as his work is concerned.

3.03 MAINTENANCE MATERIALS

- A. Upon completion of work the following amount of paint and finish shall be left for the Owner.
 - 1. One gallon - Interior wall paint (for each color used)

END OF SECTION

SECTION 12 24 00

WINDOW SHADES (Commercial Roller)

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Examine all the other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other sections affecting, or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.
- D. It is understood that the Contractor has examined the site and made his own estimates of the facilities and difficulties attending to the execution of the work, and has based his price thereon
- E. Except for unforeseeable, concealed or subsurface conditions, as determined by the Architect, the Contractor shall make no claim for additional cost due to existing conditions at the site, which in the opinion of the Architect, with reasonable diligence could have been ascertained by the Contractor in his examination of the site

1.02 The Work to be performed under this Section shall include providing all labor, materials and equipment required to furnish and install window shades and related work necessary for the proper completion of the operations as required by the Contract Documents.

- A. Provide shades for all windows listed below:
 - 1. All classrooms, academic support space and administrative spaces indicated by a window type symbol on the Drawings.
 - 2. Windows not designated by a window type symbol will not receive shades, which generally includes all translucent glazed windows, corridor windows and gym windows whether clear glazed or of translucent panel system.
- B. Provide all staging, scaffolding, hoisting and trash disposal required by the work of this Contract

1.03 SUBMITTALS

- A. Submit the following:
 - 1. Manufacturers' brochures
 - 2. Shop Drawings showing sizes, layout and installation details
 - 3. Samples of Shade Material: Not less than 3 inches square of each available color applied. Mark face of material.
 - 4. One sample shade (complete), installed in a typical opening, as selected by the architect.
 - 5. Product Test Reports: For each type of roller shade product.
 - 6. Maintenance Data: For roller shades to include in maintenance manuals. Include the following:
 - a. Methods for maintaining roller shades and finishes.
 - b. Precautions about cleaning materials and methods that could be detrimental to fabrics, finishes, and performances.
 - c. Operating hardware

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed installation of roller shades similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Source Limitations: Obtain roller shades through one source from a single manufacturer.
- C. Fire-Test Response Characteristics
 - 1. Flame-Resistance Ratings: Passes NFPA 701.

- D. Corded Window Covering Product Standard: Provide roller shades complying with WCMA A100.1.
- E. Mockups: Build mockups to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution.
 - 1. Build mockups in the location and of the size indicated or, if not indicated, as directed by Architect.
 - 2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver shades in factory packages, marked with manufacturer and product name.

1.06 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install roller shades until construction and wet and dirty finish work in spaces, including painting, is complete and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- B. Field Measurements: Where roller shades are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operable glazed units' operation hardware throughout the entire operating range. Notify Architect of discrepancies. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 – PRODUCTS

2.01 WINDOW SHADES

- A. Manufacturer and type: For the purposes of establishing level of quality, shades shall be MechoShade 'Mecho/5' chain operated units by MechoShade Systems, Inc., Long Island City, NY,. Similar products by Phifer Incorporated, Hunter Douglas Window Fashions, Levolor, Shade Technologies, Inc., or others may be considered equal and will be subject to the approval of the Architect.

2.02 APPLICATIONS/SCOPE

- A. Roller Shade Schedule:
 - 1. Shade Type 1: Manual operating, chain drive, sunscreen roller shades in all exterior windows of rooms and spaces designated on the Drawings unless specifically noted herein.

2.03 SHADE CLOTH

- A. Visually Transparent Single-Fabric Shade cloth: MechoShade Systems, Inc., ThermoVeil group, single thickness non-raveling 0.030-inch (0.762 mm) thick vinyl fabric, woven from 0.018-inch (0.457 mm) diameter extruded vinyl yarn comprising of 21 percent polyester and 79 percent reinforced vinyl, in colors selected from manufacturer's available range. 1% open/99% UV Blockage.
 - 1. 1000 Series Dense Basket Weave. Color: The color is to be selected from the manufacturer full range of colors. The intent is to match the window frame color.
 - 2. Project standard shade cloth unless noted.

2.04 SHADE BAND

- A. Shade Bands: Construction of shade band includes the fabric, the hem weight, hem-pocket, shade roller tube, and the attachment of the shade band to the roller tube. Sewn hems and open hem pockets are not acceptable.
- B. Hem Pockets and Hem Weights: Fabric hem pocket with RF-welded seams (including welded ends) and concealed hem weights. Hem weights shall be of appropriate size and weight for shade band. Hem weight shall be continuous inside a sealed hem pocket. Hem pocket construction and hem weights shall be similar, for all shades within one room.
- C. Shade band and Shade Roller Attachment:
 - Use extruded aluminum shade roller tube of a diameter and wall thickness required to support shade fabric without excessive deflection. Roller tubes less than 1.55 inch (39.37 mm) in diameter for manual shades, and less than 2.55 inches (64.77 mm) for motorize shades are not acceptable.
 - 1. Provide for positive mechanical engagement with drive / brake mechanism.

2. Provide for positive mechanical attachment of shade band to roller tube; shade band shall be made removable / replaceable with a "snap-on" snap-off" spline mounting, without having to remove shade roller from shade brackets.
3. Mounting spline shall not require use of adhesives, adhesive tapes, staples, and/or rivets.
4. Any method of attaching shade band to roller tube that requires the use of: adhesive, adhesive tapes, staples, and/or rivets are not acceptable.

2.05 SHADE FABRICATION

- A. Fabricate units to completely fill existing openings from head to sill and jamb-to-jamb, unless specifically indicated otherwise.
- B. Fabricate shade cloth to hang flat without buckling or distortion. Fabricate with heat-sealed trimmed edges to hang straight without curling or raveling. Fabricate unguided shade cloth to roll true and straight without shifting sideways more than 1/8 inch (3.18 mm) in either direction per 8 feet (2438 mm) of shade height due to warp distortion or weave design. Fabricate hem as follows:
 1. Bottom hem weights.
- C. Provide battens in standard shades as required to ensure proper tracking and uniform rolling of the shade bands. Contractor shall be responsible for assuring the width-to-height (W:H) ratios shall not exceed manufacturer's standards or, in absence of such standards, shall be responsible for establishing appropriate standards to assure proper tracking and rolling of the shade cloth within specified standards. Battens shall be roll-formed stainless steel or tempered steel, as required.

2.06 COMPONENTS

- A. Access and Material Requirements:
 1. Provide shade hardware allowing for the removal of shade roller tube from brackets without removing hardware from opening and without requiring end or center supports to be removed.
 2. Provide shade hardware that allows for removal and re-mounting of the shade bands without having to remove the shade tube, drive or operating support brackets.
 3. Styrene based plastics, and /or polyester, or reinforced polyester will not be acceptable.
- B. Manual Operated Chain Drive Hardware and Brackets:
 1. Provide for universal, regular and offset drive capacity, allowing drive chain to fall at front, rear or non-offset for all shade drive end brackets. Universal offset shall be adjustable for future change.
 2. Provide hardware capable for installation of a removable fascia, for both regular and/or reverse roll, which shall be installed without exposed fastening devices of any kind.
 3. Provide shade hardware system that allows for removable regular and/or reverse roll fascias to be mounted continuously across two or more shade bands without requiring exposed fasteners of any kind.
 4. Provide shade hardware system that allows for operation of multiple shade bands (multi-banded shades) by a single chain operator, subject to manufacturer's design criteria. Connectors shall be offset to assure alignment from the first to the last shade band.
 5. Provide shade hardware system that allows multi-banded manually operated shades to be capable of smooth operation when the axis is offset a maximum of 6 degrees on each side of the plane perpendicular to the radial line of the curve, for a 12 degrees total offset.
 6. Provide positive mechanical engagement of drive mechanism to shade roller tube. Friction fit connectors for drive mechanism connection to shade roller tube are not acceptable
 7. Provide shade hardware constructed of minimum 1/8-inch (3.18 mm) thick plated steel or heavier as required to support 150 percent of the full weight of each shade.
- C. Drive Bracket / Brake Assembly:
 1. MechoShade Drive Bracket model M5 shall be fully integrated with all MechoShade accessories, including, but not limited to: SnapLoc fascia, room darkening side / sill channels, center supports and connectors for multi-banded shades.
 2. M5 drive sprocket and brake assembly shall rotate and be supported on a welded 3/8 inch (9.525 mm) steel pin.
 3. The brake shall be an over -running clutch design which disengages to 90 percent during the raising and lowering of a shade. The brake shall withstand a pull force of 50 lbs. (22 kg) in the stopped position.
 4. The braking mechanism shall be applied to an oil-impregnated hub on to which the brake system is mounted. The oil impregnated hub design includes an articulated brake assembly, which assures a smooth, non-jerky operation in raising and lowering the shades. The assembly shall be permanently lubricated. Products that require externally applied lubrication and or not permanently lubricated are not acceptable.

5. The entire M5 assembly shall be fully mounted on the steel support bracket, and fully independent of the shade tube assembly, which may be removed and reinstalled without effecting the roller shade limit adjustments.

- D. Drive Chain: #10 qualified stainless steel chain rated to 90 lb. (41 kg) minimum breaking strength. Nickel plate chain shall not be accepted.

2.07 ACCESSORIES

- A. Fascia:
 1. Continuous removable extruded aluminum fascia that attaches to shade mounting brackets without the use of adhesives, magnetic strips, or exposed fasteners.
 2. Fascia shall be able to be installed across two or more shade bands in one piece.
 3. Fascia shall fully conceal brackets, shade roller and fabric on the tube.
 4. Provide bracket / fascia end caps where mounting conditions expose outside of roller shade brackets.
 5. Notching of Fascia for manual chain shall not be acceptable.
- B. Warranty: Interior Shades – Ten-year manufacturers warranty on manually operated components except bead chain which is a maintenance/service item. Ten-year manufacturers warranty on shadecloth with provision that it will not deteriorate, sag or main fit for use for the full warranty period when used as an interior rollershade.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 ROLLER SHADE INSTALLATION

- A. Install roller shades level, plumb, square, and true according to manufacturer's written instructions, located so shade band is not closer than 2 inches to interior face of glass. Allow clearances for window operation hardware.

3.03 ADJUSTING

- A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

3.04 CLEANING AND PROTECTION

- A. Clean roller shade surfaces after installation, according to manufacturer's written instructions.
- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer that ensure that roller shades are without damage or deterioration at time of Substantial Completion.
- C. Replace damaged roller shades that cannot be repaired, in a manner approved by Architect, before time of Substantial Completion.

END OF SECTION